



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>





27. 558.



28

v. 5th - 1828.

JOURNALS OF SIEGES

CARRIED ON

BY THE ARMY

UNDER

The Duke of Wellington,
IN SPAIN,

BETWEEN THE YEARS 1811 AND 1814.

WITH NOTES.

BY COLONEL JOHN T. JONES,

(Corps of Royal Engineers.)

AIDE-DE-CAMP TO THE KING.

SECOND EDITION.

IN TWO VOLUMES.

VOL. I.

LONDON :

PRINTED FOR T. EGERTON, BOOKSELLER TO THE ORDNANCE,
MILITARY LIBRARY, WHITEHALL.

1827.
558.



London : Printed by C. Roworth,
Bell-yard, Temple-bar.

PREFACE.

THE Journals of the Sieges in Spain were originally penned at the commencement of 1813, for the avowed purpose of drawing general attention to the very inefficient composition and inadequate strength of the siege establishments of the empire, which certainly at that period had the effect of rendering our attacks of fortified places far less certain and less powerful than our natural advantages, great resources, and liberal military expenditure entitled the nation to expect.

The first edition was exhausted in a few months; but the attention of those entrusted with regulating the engineers'

branch of the army being at that time zealously engaged in giving it due organization and efficiency, any further discussion of the subject would have been misplaced, and no second edition was allowed to appear.

In the twelve or thirteen years which have since elapsed, a very near approach has been made to perfection, and the Journals would have been left to sink into oblivion, had not many officers pressed for their republication, as the means of preserving the details of the engineers' and artillery exertions during operations unlikely to be again equalled in bold and arduous achievement.

Under this view, the narrative connecting the several operations, and also the two chapters relating to deficiencies, happily no longer existing, have been expunged, and the work is now put forth merely as professional memoranda of the artillery

✱

and engineers' arrangements at the Sieges in Spain.

It should be stated, that the additional artillery details introduced into the Journals have been furnished by Colonel Sir A. Dickson and Lieutenant Colonel Sir J. May, K.C.B., who directed the service of that arm at the several sieges; but the observations on artillery in the notes can boast of no such authority for their correctness, being merely general reasoning on the properties and use of ordnance, as connected with the science of attacking fortresses, to the extent essentially necessary to be understood for the due performance of an engineer's duty.

PRELIMINARY OBSERVATIONS
ON
THE ATTACK OF FORTRESSES,
WITH REFERENCE TO THE SIEGES IN SPAIN.

A SIEGE is one of the most arduous undertakings on which troops can be employed,—an undertaking in which fatigue, hardships, and personal risk, are the greatest. One in which the prize can only be gained by complete victory, and where failure is usually attended with severe loss or dire disaster.

Success or failure at a siege frequently decides the fate of a campaign, sometimes of an army, and has more than once that of a state. The failures before Pavia in 1525, Metz in 1552, Acre in 1799, Prague in 1757, and Burgos in 1812, are examples of each of the above. By the first, France lost her monarch, the flower of her nobility, and her Italian conquests. By the second, she was saved from destruction, and 30,000 of her enemies perished. The third, stopped her most successful general in his career. By the fourth, the greatest warrior of his age was brought to the brink of destruction; and by the last, a beaten enemy gained time to recruit his forces, concentrate his scattered armies, and regain the ascendancy. Innumerable other instances

of disastrous consequences attending the failure of sieges might be adduced ; but the above are sufficient to make every one sensible of the importance of the undertaking, and feel that the dearest interests of a country are frequently staked on the sure and speedy reduction of a fortress.

It is, consequently, of great moment to a state, that its sieges should be carried on in the best possible manner, that is, by a due union of science, labour, and force, be rendered not only short, but certain, and little costly in men. It is well known that the English sieges have never united these three qualities ; and the object of this preliminary chapter is to offer an explanation on various defects of organization, and other circumstances which, during the contest in the Peninsula, rendered such mode of proceeding impracticable to the British army, and necessitated a departure from all established rules and principles of attack.

This is the more necessary, because scientific perfection in carrying on sieges being in great measure the result of superior wealth and civilization, seems to attach particularly to England. It is observable that in all periods of the world, and in all countries, the means employed for the reduction of fortresses, and the science displayed in their application, have invariably increased, and become more overwhelming and irresistible, with the growth of refinement and knowledge ; but more particularly in Europe during the two last centuries, wherein an unusual spread of wealth, knowledge, and talent, having been turned to the support of military movements, has caused the results of sieges (and, indeed, of almost all the operations of war) to depend

far more on combination and expenditure than on individual exertion or heroism.

This may be made apparent by a slight retrospect to the sieges of the 16th century. At that period the art of disposing the several works of a fortress to cover each other, and be covered by their glacis from the view of an enemy, was either unknown or disregarded. The small quantity of artillery in use, its unwieldiness, and the great expense and difficulty of bringing it up, occasioned so little to be used at sieges, that the chief object in fortifying towns was to render them secure from escalade and surprise by lofty walls or height of situation; and all places fortified prior to the 16th century are invariably of such construction. The simplicity of the places to be attacked, gave the same character to the operation itself: every thing in those days was effected by desperate courage, without the aid of science, and gallantly to contend in individual combat, or heedlessly to confront danger, were considered the perfection of a besieger.

Thus the contest dragged on for months together in petty but costly affairs, and the most persevering, or most hardy troops, however ill organized or supplied, were the most dreaded, and not unfrequently the most successful besiegers. But as artillery became more moveable, and large quantities of it began to be employed at sieges, lofty and exposed walls no longer opposed a moderate barrier to its effects; large breaches were speedily effected—places which had resisted for months were carried by assault in a few days, and, to restore an equality to the defence, it became necessary to screen the ramparts from distant fire.

The attempt to gain security by concealment rapidly advanced towards perfection, whilst the means of the besiegers remained the same, and in the middle of the 16th and commencement of the 17th centuries, works were so well covered and so skilfully disposed, that the defence of towns obtained a momentary superiority over the rude efforts of the attack as then practised.*

Unhappily, however, for this pre-eminence, Louis XIV. appeared personally on the scene, and brought to the attack of fortresses a preparation in ordnance, ammunition, and materials, so vast and costly, as even at this day to excite astonishment; and thus supported, the genius of one man, (Vauban,) perfected in the first offensive campaigns of that monarch, a covered mode of attack, by a combination of science and labour, which rendered easy, by the steady advances of a few well-trained brave men, the reduction of places capable of defying for ever the open violence of multitudes. These increased means of attack caused the art of concealment to be further studied, till at length, in well constructed fortresses, not a single wall remained exposed to view, and the sap and the mine became as indispensably necessary as the gun and the mortar to the success of a besieger.

To render this intelligible to the general reader, it may be necessary to give some slight description of the progress of a modern attack.

The first operation of a besieger is to establish a force equal to cope with the garrison of the town about

* In proof of this statement see the remarkably obstinate and successful defences made by the Dutch against the Spaniards during the reigns of Philip II. and III.

to be attacked, at the distance of six or seven hundred yards from its ramparts.

This is effected by approaching the place secretly in the night with a body of men, part carrying entrenching tools, and the remainder armed. The former dig a trench in the ground parallel to the fortifications to be attacked, and with the earth that comes out of the trench raise a bank on the side next the enemy, whilst those with arms remain formed in a recumbent posture in readiness to protect those at work, should the garrison sally out. During the night this trench and bank are made of sufficient depth and extent to cover from the missiles of the place the number of men requisite to cope with the garrison, and the besiegers remain in the trench throughout the following day in despite of the fire or the sorties of the besieged. This trench is afterwards progressively widened and deepened, and the bank of earth raised till it forms a covered road, called a parallel, embracing all the fortifications to be attacked; and along this road guns, waggons, and men, securely and conveniently move, equally sheltered from the view and the missiles of the garrison. Batteries of guns and mortars are then constructed on the side of the road next the garrison, to oppose the guns of the town, and in a short time, by superiority of fire principally arising from situation, silence all those which bear on the works of the attack. After this ascendancy is attained, the same species of covered road is, by certain rules of art, carried forward, till it circumvents or passes over all the exterior defences of the place, and touches the main rampart wall at a spot where it has been previously beaten down by the fire of batteries erected

expressly for that purpose in the more advanced parts of the road.

The besiegers' troops, being thus enabled to march in perfect security to the opening or breach in the walls of the town, assault it in strong columns, and being much more numerous than the garrison defending the breach, soon overcome them, and the more easily as they are assisted by a fire of artillery and musketry directed on the garrison from portions of the road only a few yards from the breach; and which fire can, at that distance, be maintained on the defenders of the breach till the very instant of personal contention without injury to the assailants. The first breach being carried, should the garrison have any interior works, the covered road is by similar rules of art pushed forward through the opening, and advanced batteries are erected in it to overpower the remaining guns of the place; which effected, the road is again pushed forward, and the troops march in security to the assault of breaches made in a similar manner in those interior works, and invariably carry them with little loss.

To preserve the life of a single soldier is, however, always an object; therefore, when time is abundant, the loss of the few men attendant on the assault of breaches under these favourable circumstances is avoided; as by a small delay, the covered road can be equally well pushed up and through the breach, without giving the assault, as after the breach has been carried; and thus, by art and persevering labour, the strongest and most multiplied defences frequently fall without any exertion of open force.

From the foregoing description it will readily be con-

ceived, that the most important object at a siege is to carry forward the covered road to the walls of the place, and that all the other operations are secondary to, and in furtherance of, such an advance; and consequently, that the efficiency of armies at sieges depends on their ability rapidly to complete the road, and at a small expense of life.

To enable the general reader to form his own judgment on the means necessary for such efficiency, it should be stated, that the formation of the covered road is attended with different degrees of difficulty in proportion as it advances.

At its commencement, being at the distance of 600 yards from the fortifications and not straitened for space, the work can readily be performed by the ordinary soldiers of the army. The second period is, when the road arrives within a fair range of musketry or 300 yards from the place; then it requires particular precautions, which, however, are not so difficult, but that the work may be executed by soldiers who have had a little previous training. The third period is, when it approaches close to the place—when every bullet takes effect—when to be seen is to be killed—when mine after mine blows up the head of the road, and with it every man and officer on the spot; when the space becomes so restricted that little or no front of defence can be obtained, and the enemy's grenadiers sally forth every moment to attack the workmen, and deal out destruction to all less courageous, or weaker than themselves.

Then the work becomes truly hazardous, and can only be performed by selected brave men who have acquired a difficult and most dangerous art called sapping, from which they themselves are styled sappers.

An indispensable auxiliary to the sapper is the miner, the exercise of whose art requires even a greater degree of skill, courage, and conduct, than that of his principal. The duty of a miner at a siege is to accompany the sapper, to listen for and discover the enemy's miner at work under ground, and prevent his blowing up the head of the road either by sinking down and meeting him, when a subterraneous conflict ensues, or by running a gallery close to that of his opponent, and forcing him to quit his work by means of suffocating compositions, and a thousand arts of chicanery, the knowledge of which he has acquired from experience. Sappers would be unable of themselves, without the aid of skilful miners, to execute that part of the covered road forming the descent into the ditch, and in various other portions of the road, the assistance of the miner is indispensable to the sapper: indeed, without their joint labours and steady co-operation no besiegers' approaches ever reached the walls of a fortress.

A siege, scientifically prosecuted, though it calls for the greatest personal bravery, the greatest exertion, and extraordinary labour in all employed, is beautifully certain in its progress and result. More or less skill or exertion in the contending parties will prolong or shorten in some degree its duration, but the sapper and the miner, skilfully directed and adequately supported, will surely surmount every obstacle. On the contrary, the sieges of armies destitute of these capable and confident auxiliaries, are hazardous in the extreme. Their only chance of success is in scrutinizing the exterior of a fortress to discover some spot from whence, in consequence of the irregularity of the ground or faults of construction, the main escarpe wall can be seen

at a distance sufficiently great for ordinary soldiers to approach with the covered road, and there establish batteries to form an opening through the wall into the place.

That effected, the troops must advance to the assault of the breach as in the 16th century, losing the shelter of the covered road at the moment the fire of the place becomes most powerful and destructive; whereas, the fire of the besiegers' distant batteries being necessarily suspended to avoid killing their own storming party, the garrison can, with impunity, mount on their parapets and use every kind of weapon and missile in their defence.

Should the columns, under these disadvantages, arrive in good order at the brink of the ditch, they must descend into it, down a wall from fourteen to sixteen feet in depth, which cannot fail to break their order, and throw them into confusion. No fresh formation can be attempted, in a spot where death is incessantly showering down on the assailants, and they rush to the breach more like a rabble than a solid column.

From this moment, success hinges on the individual and confident bravery of the officers and troops, and the unshrinking firmness of the commanding general in encouraging and supporting their efforts.

These qualities, when united in a high degree, may obtain success at a considerable sacrifice of life; but whenever such nature of assault has been attempted under ordinary circumstances and feelings, in former or recent wars, repulse has invariably been the consequence.

Indeed, as the result of general experience, it may be assumed, that should an army, unprovided with sappers and miners, and the necessary materials and means to render their services efficient, be opposed by a place fortified according to the modern system, so as to have its walls completely covered, all the usual and known efforts to reduce it would prove unavailing; no period of time nor sacrifice of men would purchase success, and the prudent plan would be to decline the attempt.

These considerations have for many years had their due weight with the great powers of Europe, and induced them to form and keep up, as integral portions of their military strength, every necessary auxiliary for the reduction of fortresses; and their sieges have, in consequence, become certain and comparatively bloodless. But England, constitutionally jealous of permanent military establishments, always discountenanced military organization and military preparation till the hour of need, and with respect to sieges, they being of rare occurrence, and moreover, exclusively offensive operations, even carried her jealous feelings beyond the bounds of rational prudence; for possessing a corps of officers professionally educated and well grounded in the science of attack and defence, she denied them every requisite establishment to render their acquirements availing, and most unreasonably expected her armies to reduce the skilfully fortified and well covered places of the 19th century, with means inferior to those brought against the exposed and ill-constructed places of the 16th and 17th centuries.

After this explanation, it being stated in plain and

unequivocal language that the army in Spain was unattended by a single sapper or miner till late in 1818:—that the works of a regular siege imperatively demand supplies of ordnance, ammunition, stores, and materials, and a force of men infinitely greater than could by any possibility be collected together by the officers in the Peninsula; and further require a period of time for their completion, which the vigilance and judicious arrangements of a superior enemy would not grant—it must be evident to every reader, that the reduction of the fortresses garrisoned by the French in Spain would have been utterly hopeless, had not the mind and nerve of the British commander, rising superior to the trammels of rule, made scientific theory bend to force, by skilfully planning, and most vigorously pushing forward the irregular and hasty, but truly formidable modes of attack, detailed in the following Journals.*

* This chapter has been prefixed to the Journals in consequence of the recent appearance of a work written by the late General Foy, wherein, after condemning in the most unqualified manner, as unskilful and inefficacious the mode of attacking fortresses adopted by the British army in Spain, he brings it forward as indisputable proof of want of military acquirements in the general, and want of professional knowledge in the engineers.

This is surely both unreasonable and unjust; for must it not strike every impartial person, that the more decidedly such modes of attack are pronounced to be rash, hazardous, and inefficient, so much stronger is the inference that considerable military talent and professional skill must attach to those who were able to render them, when directed against Ciudad Rodrigo and Badajos, of such undeviating firmness, rapid movement, and certain result, as to outstrip the calculations of the ablest of the French marshals, deceive the vigilance of the French governors, paralyse the science of the French officers, and render null every defensive expedient and every defensive effort of their brave and veteran garrisons?

CONTENTS

OF

VOL. I.

	PAGE
CHAPTER I.—Recapture of Olivença in April, 1811 . . .	1
II.—Attack of Fort Christoval at Badajos in May, 1811.	11
III.—Attack of Fort Christoval and the Castle of Badajos in May and June, 1811. . .	35
IV.—Siege of Ciudad Rodrigo	92
V.—Siege of Badajos in March and April, 1812	156
VI.—Escalade and capture of the French works at Almaraz, by Lieutenant-General Sir R. Hill, in May, 1812	245
VII.—Reduction of the French fortified posts at Salamanca, in June, 1812	265
VIII.—Capture of the Retiro at Madrid in August, and Journal of the siege of Burgos in September and October, 1812 . . .	288

ERRATA.

Page 91, last line, *for* Almaida, read Almada.

99, *Memorandum*.—The value of a vintem is 5.400 farthings.

127, between lines 9 and 10, insert—*To breach*.

289, line 2, *for* interior read exterior.

484, line 10, *for* *e d*, read *c d*.

Having part of its Ammunition immedia

311.

	Ordnance.					to carry Ammunition.
	Guns.		5½-Inch Howitzers.	10-Inch Mortars.	8-Inch Howitzers, brass.	
	24-Pounders.	18-Pounders.				
1st Division, B.	12	..	..	..	..	4,0. 36
2d Division, do.	12	..	..	..	..	4,0. 36
3d Division, do.	10	4	..	..	..	3,0. 63
4th Division, do. ....	..	..	20	..	2	.. 22
5th Division, do. ....	..	..	..	8	..	.. 23
1st TRIP.						
Total in Divisions, at 350 rounds a Gun, and 160 for each Howitzer and Mortar, }	34	4	20	8	2	11,0. 90
2d TRIP.						
To travel in reserve .....	..	..	..	..	..	4,0. 26
Wanting to complete to 800 rounds a Gun, and 400 per Howitzer and Mortar, }	..	..	..	..	..	8,0. 32
Total, at 800 rounds per Gun, and 400 Howitzers and Mortars, }	..	..	..	..	..	24,0. 48

trals

JOURNALS OF SIEGES
IN
SPAIN AND PORTUGAL.

CHAPTER I.

RECAPTURE OF OLIVENÇA.

ON the retreat of the French army under Marshal Massena out of Portugal at the commencement of March, 1811, Lieutenant-General Sir W. Beresford was destined, with three divisions of infantry, two brigades of artillery, and a small body of cavalry, to act on the Alemtejo frontier, where a French force under Marshals Soult and Mortier had recently captured Olivença and Badajos, and was at the moment laying siege to Campo-maior.

That place, though strongly fortified and formerly well kept up, had of late years been utterly neglected. As an efficient fortress, Campo-maior would, from its size, require a garrison of 5,000 men ; but, under present cir-

cumstances, only 200 militia were thrown in to guard five pieces of artillery mounted on its ramparts. Major Tallaia, of the Portuguese engineers, was governor, and little more was expected from him than to hold out till seriously menaced; but he made such a skilful disposition of his small force, that the French, deceived as to their numbers, were induced to sit down regularly before the place with 5,000 men, bring up a battering train, and open trenches.

They attacked on the north of the town, and commenced by erecting a breaching battery of six 24-pounders in an abandoned crown-work, at 400 yards distant from the left face of the bastion of Concelho, with a counter-battery of three 12-pounders against the opposite flank of the demi-bastion do Prencipe; at the same time they put seven mortars in battery, and pushing a sap to the glacis, formed a trench along its crest for a close musketry fire. The scarp to be breached was twenty-two feet high, and the battery could not strike it lower than twelve feet from the bottom of the ditch: still after five days battering, as the rubbish could not be removed on account of the musketry fire, it formed a practicable breach, and the weak garrison became at the mercy of the besiegers; even then, the governor stipulated for twenty-four

hours delay, for the chance of being relieved, which not occurring, he marched out on the 23d March.

Sir W. Beresford crossed the Tagus on the 17th March, on a bridge put down at Tancos, and proceeding by Ponte-de-sor, Crato and Portalegre, reached Campo-maior on the 25th. The French had just evacuated the town, and their battering artillery and stores were still in sight, moving along the Badajos road under a strong escort; an immediate pursuit being ordered, some smart skirmishing ensued, which continued to the very bridge of the Guadiana.

At this time the French had been in possession of Badajos only a fortnight, and the works and batteries of the recent siege still afforded considerable cover, the breach was open, and the garrison ill supplied with provisions, ammunition, or stores: its recapture, therefore, seemed not only inevitable, but easy, if speedily invested; but the river Guadiana interposed, and there was neither a pontoon train nor other means with the army for crossing rivers.

The magazines at Elvas were ransacked in vain to supply the deficiency: they were found to contain neither timber nor plank, and only a small quantity of cordage: but luckily one of them sheltered five Spanish boats and four old Spanish pontoons. These were immediately

converted into rafts, or flying bridges, and every means of the engineers was promptly turned to fell trees and form a fixed bridge on trestles.

On the 3d April, the trestle-bridge (made only 7 feet in height because trees to supply timber of larger dimensions could not be found near the spot) was put down on the Guadiana under protection of the guns of Fort Juramenha, and the following day was fixed for the passage of the army; but during the night the water rose three feet and passed over the planking of the bridge.

On the 4th, the river continued to rise, and the bridge having become perfectly useless, the troops were ferried across on the rafts, between the 5th and the 8th.

During the fortnight thus occupied the French had filled in the trenches before Badajos, partly built up the breach, thrown in a certain supply of provisions and ammunition, and removed their battering train: therefore, as soon as the allies had effected the passage of the Guadiana, Marshal Mortier, leaving a garrison of 4,000 men in the place for its defence, retired with the remainder of his forces on Seville. He also left a detachment of 400 men in Olivença.

Olivença is a town containing 5,000 inhabitants, situated in an open country on the left of

the Guadiana, two leagues from Juramenha, and not blocking up any communication. It is fortified with nine regular fronts, the ravelin of each remaining unfinished; the scarp is of stone, from 21 to 25 feet in height, and the counterscarp varies from 5 to 9 feet in depth. It would be difficult to assign a specious reason for leaving so small a body of men as 400 in so large a place—a number totally inadequate for a protracted defence, and still far too great to sacrifice without an object.

On the 9th the army invested the town, forming its bivouacs in the olive-grounds on the north and west sides. Handsome terms were then proposed to the governor, which being rejected, a reconnoissance was made with a view of storming the works; when an escalade appearing too hazardous an enterprise, it was decided to raise batteries and make a breach in the curtain of St. Francisco from an abandoned lunette at 340 yards distance, the terre-plein of which was considered to be sufficiently elevated for the guns to see the wall low enough for that purpose.

Captain Squire was charged with the engineer arrangements, and Major Dickson with those of the artillery.

PREPARATIONS FOR THE ATTACK.

10th April.

Twenty-four mules, laden with the following entrenching tools and stores, were dispatched from Elvas, viz.

6000 sandbags,
130 shovels,
35 spades,
60 pickaxes ;

and about eighty enxados were collected in the vicinity of the place. The officers of engineers were Captain Ross and Lieutenant Forster, and there were present two rank and file of the corps of Royal Military Artificers.

Six heavy brass 24-pounders on travelling carriages, with 300 rounds of ammunition per gun, and all requisite stores, and also block carriages for conveying the guns, were, by great exertion, prepared in the arsenal at Elvas in the course of the day ; but the number of bullocks (104 pair) required for their removal could not be collected till the following morning.

11th April.

The equipment moved this morning about a league on the road to Juramenha : a company of Portuguese artillery of 100 men and officers under Captain Jose de San Payo accompanied it for the duties of the batteries.

Marshal Beresford advanced with the main body of his corps towards Zafra, leaving Major-General the Hon. Lowry Cole to carry on the attack with his division.

JOURNAL OF THE ATTACK.

Night between 11th and 12th April.

At dusk a working party of 150 men, supported by a covering party of 200 men, commenced a battery for four guns on the terreplein of the lunette.

The garrison kept up a brisk fire of musketry all night, nevertheless good cover was obtained before day-break, and the work was continued throughout the following day.

Night of the 12th April.

In the course of this night the breaching battery was completed, and cover established for field-guns to enfilade and take in reverse the curtain to be breached.

Night between 13th and 14th April.

The heavy artillery crossed the Guadiana at Juramenha on the 12th, and having arrived in the vicinity of the point of attack, it was attempted this evening to put the guns in battery; but it was found impracticable, from the badness of the road, and the circuit the guns were obliged to make, to arrive at the lunette.

14th April.

The communication to the breaching battery being rendered practicable, four brass 24-pounders, with the necessary ammunition and stores, were moved in. The latter were admirably secured in the original magazine of the lunette, which had been left uninjured.

The supporting batteries were also armed with the field-pieces of the German artillery, viz. one 5½ inch howitzer and three 6-pounders.

These preparations being all complete on the morning of the 15th, General Cole, by means of a flag of truce, offered handsome terms to the governor if he would surrender in half an hour; but no answer being returned in the specified time the batteries opened at 8 A. M.

The point selected to be breached was on the left of the gate of St. Francisco. The scarp was 23 feet high, and the bottom line of the breach was made 8 feet above the level of the ditch.

The wall proved extremely bad, and a great effect had been produced on the masonry by 11 A. M. when the governor hoisted a white flag, and expressed his readiness to accept the terms offered in the morning. General Cole now refused him any terms, insisted on an unconditional surrender, and ordered the artillery to resume their fire. At 1 P. M. the breach became nearly practicable, although only 320

shot had been fired, and the governor, fearing an assault, surrendered at discretion.

The garrison marched out prisoners, 370 men and officers.

The ordnance found in the place consisted of

Mounted.

8-pounder	. . .	brass	. . .	1
4-pounders	. . .	ditto	. . .	2
12-pounders	. . .	iron	. . .	5
8-pounders	. . .	ditto	. . .	2
6-pounders	. . .	ditto	. . .	2
				<hr/> 12

Dismounted.

8-pounder	. . .	brass	. . .	1
12-pounders	. . .	iron	. . .	2

The iron guns, which the French had found lying on the works without carriages, were very ingeniously mounted by them, after the investment, on strong bullock cars of the country, by the addition of frame-work, and a block under the pole, which rendered the cars very manageable as temporary gun-carriages.

In this operation the Portuguese artillery, composed principally of young soldiers, showed a good deal of spirit and steadiness; for though exposed to a brisk fire from five or six guns and a good deal of musketry, which killed two and wounded six others in the breaching battery, scarcely a shot was thrown away.

Ammunition expended.

Battering guns, 80 rounds each.

Field-pieces, - 60 ditto.

16th April.

During the operations against Olivença a bridge of casks 200 feet in length had been completed at Juramenha, and a tête-de-pont for 1,500 men thrown up for its defence, so as to afford a secure point of communication across the Guadiana for the army which had taken post at Zafra and St. Martha, to prevent supplies being thrown into Badajos; and the preparations for the attack of that fortress now received undivided attention. Working parties were employed to make fascines and gabions in the pine-wood on the Valverde road, at Olivença, at Almoreira, and the Quinta da Falcata. Platforms were prepared at Elvas, and some of the senior officers of engineers were dispatched to Abrantes and other places to collect and forward entrenching tools, whilst the junior officers, as well as their soldiers, increased to 27 in number, by a detachment disembarked at Lisbon on the 22d March, but who had never seen a sap, battery, or trench constructed, were daily drilled in these and other siege operations. (1)

CHAPTER II.

ATTACK OF BADAJOS IN MAY, 1811.

(Plate I.)

BADAJOS is a large fortified town situated on the left bank of the Guadiana; which river is there from three to five hundred yards broad, and washes one-fourth of the enceinte, rendering it nearly inattackable. The defences along the river are confined to a simple and badly flanked rampart, with an exposed revetement, but on the other sides consist of eight spacious and well-built regular fronts, having a good counterscarp, covered-way, and glacis, but the ravelins incomplete. The scarp of the bastions exceeds 30 feet in height, and that of the curtains varies from 23 to 26 feet. In advance of these fronts are two detached works: one, called the Pardaleras, at 200 yards distance, is a crown-work; its escarps are low, its ditches narrow, and its rear badly closed: the other, called the Picurina, is a strong redoubt 400 yards in advance of the town, of which a plan and sections are given, *Plate V. Figs. 1, 2, and 3.* On the north-east of the town, at the angle formed by the junction of the river Rivillas

with the Guadiana, rises a hill to the height of more than 100 feet, the summit of which is crowned by an old castle ; and its walls, naked, weak, and but partially flanked, here form part of the enceinte of the place. *Section AD, Fig. 2, Pl. II.*

The space contained within the castle is considerable, and various projects have at different times been under consideration for occupying it with a citadel or some interior defensive post ; but nothing had ever been carried into effect. Indeed the defences of the castle had been unaccountably neglected ; two or three field-pieces only being mounted on its walls, and those without the shelter of proper parapets.

Immediately opposite to the castle, on the other bank of the Guadiana, at the distance of 500 yards, are situated the heights of Christoval, rising to nearly the elevation of the castle ; and as the terreplein or interior space of the castle is an inclined plane towards the Guadiana, every part of it is seen from the Christoval heights. To prevent a besieger readily availing himself of this advantage in any attack of the town, a fort has been constructed on them : its figure is nearly that of a square of 300 feet ; the scarp, which is well built of stone, is 20 feet in height, and mostly well covered by a reveted counterscarp. *Section CF, Pl. I.*

The communication between the town and Fort Christoval is very open to interruption; being either by a bridge 600 yards in length, subject to be enfiladed, or by boats for which there is no security.

20th April.

Lord Wellington, arrived at Elvas from the army in the north, determined to lay immediate siege to Badajos, if any plan of attack could be offered which should not require more than sixteen days open trenches, as in that period, and the time required to complete the necessary preparations for the siege, it was calculated that Marshal Soult would be able to collect a force equal to its relief. Various methods of attack were considered, but all of them required more than the allotted time. Many of the most capable officers and Lord Wellington himself wished the attack to be directed against one of the south fronts; nor can it be denied that, with time, and adequate means in men, stores, and artillery, such should have been the attack; but to approach either of the south fronts, it is indispensably necessary to reduce the Pardaleras detached outwork, which would oblige the opening of the trenches at a greater distance than the usual routine, and would consequently require more labour and

time to perform, than the attack of a similar front without detached works. Eighteen days are usually calculated as the minimum of time required to penetrate into such fronts as those of Badajos, and adding four days for the additional labour to gain possession of the Pardaleras, no period under 22 days could be stated for the attack of the south fronts, even if the means allotted had been abundant. Whereas, on the contrary, they were limited to such guns and stores as could be spared from the armament of Elvas, and when collected were found totally unequal to the most simple combinations of a regular siege.

Time and means thus proving inadequate to the attack of either of the regular fronts, and it being of the greatest consequence to the future operations of the army that Badajos should be retaken, Lieutenant Colonel Fletcher, the commanding engineer, submitted the following plan for reducing the castle.

PROJECT OF ATTACK.—*Pl. I. Section*

From the inclination of the terreplein of the castle towards the Christoval heights, and those heights being situated somewhat in rear of the line of prolongation of the front defences of the castle, it is apparent that Fort Christoval being reduced, and powerful batteries erected in and

near it, no body of troops could stand in the castle for the defence of a breach in its walls, without the erection of traverses, and other cover, requiring a degree of labour much beyond the power of the garrison to bestow during a short attack.

The castle wall itself, being entirely exposed, and apparently of very bad masonry, could not be expected to require more than three or four days battering to form a practicable breach in it; and as in so short a period, keeping up a constant fire from the batteries on the Christoval heights, no retrenchment could be formed capable of much resistance, there could be little doubt that, a breach once made in the outer wall, the castle would be readily carried; in which case Badajos could make no further resistance, as the castle overlooks the town, and there is no defensive line of separation between them.

Plate II.

Under these ideas it was proposed, as a primary measure, to break ground before Fort Christoval on the right of the Guadiana, and having breached and carried the fort by assault, to erect batteries in and near it for the whole of the artillery to plunge into, enfilade, and overwhelm the interior of the castle. Secondly,

on the night succeeding the capture of Fort Christoval, to open a parallel, AB, in the plain under the castle on the opposite bank of the river, the left of the parallel being kept far retired from the fire of the lunette St. Roque, and St. Pedro bastion, but its right to approach within 450 or 500 yards of the castle, at which distance it was considered batteries might be erected which would readily breach the exposed escarp-walls on the crest of the castle hill, *Fig. 2.* As the only artillery which could be procured, beyond the guns required for breaching, consisted of four howitzers, a single battery for that number and nature of ordnance was all that could be proposed on the left of the river to oppose the fire of the place and annoy the defenders.

In order to conceal this plan of attack from the garrison, lest they should begin to throw up interior defences in the castle before the batteries were prepared to disturb them, it was proposed on the same night that ground should be broken against Christoval, to open false attacks against the two other detached works of the place, and to continue them till the breach in Christoval should become practicable; then to relinquish those attacks, as concealment would be no longer possible, and the workmen would be required for the parallel in the plain:

22d April.

Lord Wellington with Colonel Fletcher reconnoitred the place. They forded the Guadiana below the Caya, with an escort of light troops and cavalry, and having passed the road from Valverde into the town, soon afterwards perceived a considerable convoy moving along the same road at some distance. Orders were given to attack the approaching body, but before the troops could be formed up for that purpose, the garrison had sallied out with 1200 or 1500 men, and two field-pieces, to their aid, which force, taking post on the Sierra del Viento, effectually covered the return of the convoy. Some sharp skirmishing, however, took place, and the escort sustained some loss. After this brush Lord Wellington minutely examined the defences of the castle, and convinced himself of the feasibility of the project under consideration. The next day, being obliged to return with all speed to the army on the Coa, in consequence of the movements of the French in that quarter indicating an immediate effort to raise the blockade of Almeida, he directed Sir W. Beresford to undertake the siege with his corps, and issued the following instructions for the operation :

MEMORANDUM.

Elvas, 23d April, 1811.

1. The cutting tools having been sent to Olivença this morning, a body of troops to be stationed to-morrow morning in the wood between Olivença and Badajos to cut materials.

2. As soon as a sufficient quantity of materials will be cut, Badajos to be invested on the right as well as left banks of the Guadiana.

3. If the weather should become settled before the materials will be cut, the place to be invested as stated in article No. 2, as soon as the weather will be so settled as that the troops may be kept out without inconvenience; —the importance of the early investment of the place will be observed from what follows hereafter.

4. On the day the place will be invested, the following measures to be adopted: 1st, The flying bridge to be fixed on the Guadiana. 2d, The guns and stores for which there are conveyance, to be moved up from Olivença to the station fixed upon for the formation of the depôt on the left of the Guadiana. 3d, The engineers' stores to be moved from Olivença, Elvas, and Juramenha, to the same place, and to the place fixed upon for the depôts on the right of the Guadiana, in their due proportions,

4th, The materials made at Elvas, Campo-maior, &c. for which there may be a conveyance, to be moved to the ground on the right of the Guadiana. 5th, The materials prepared at Olivença, in the wood, and all places on the left of the Guadiana, to be moved to the ground on the left of that river. 6th, The ordnance and stores which there may be means of moving, to be sent from Elvas to the ground on the right of the Guadiana.

5. On the day after the place will be invested, the carriages and cattle to return to Elvas from the stations on both banks of the Guadiana, for more ordnance and stores, and to go back to those stations respectively with the proportions of ordnance and stores required to complete each, on the third day, and the same to be repeated on the fourth and fifth day from the investing the place, till all the ordnance and stores required will be collected in their proper depôts.

6. Ground to be broken for attacks on the Pardaleras, Picurina, and St. Christoval, on the night of the day the materials will be in deposits on the ground.

7. As soon as the British troops will be in possession of St. Christoval, the flying bridge placed below the junction of the Caya to be brought to a station above the town, and, if

possible, below the junction of the Gevora; and with this view it is recommended that the fords and passages of the river above the town should be well reconnoitred as soon as the place will be invested.

W.

The same day Major Dickson was directed to take upon himself the charge of the artillery arrangements, and prepare for service the following proportion of ordnance and ammunition from the armament of Elvas, including the heavy guns which had been employed against Olivença, viz.

24-pounders	. .	brass	. .	16
16-pounders	. .	ditto	. .	8
10-inch howitzers		ditto	. .	2
8-inch howitzers		ditto	. .	6

with 800 rounds for each gun and 400 rounds for each howitzer. Two companies of Portuguese artillery from Lisbon, and three at Elvas, were to be assembled for the duties of the batteries.

24th April.

During the night of the 23d the river Guadiana rose 7 feet perpendicularly, and carried away the bridge of casks, the materials composing it floating down the stream, so that

all communication between Marshal Beresford's corps and Portugal was cut off. On the 29th the communication was restored by means of a flying bridge, and on the 1st May the bridge of casks was replaced and remained secure till removed; indeed, at this time the weather became so generally hot and dry, and the stream diminished so much in force and depth, that constant use was made of the ford.

INVESTMENT.

4th May.

Major General the Hon. William Stewart with 5,000 men marched from Talavera la Real at midnight along the left of the river and effected the investment by 9 A. M. without any loss. The flying bridge was instantly fixed on the Guadiana, immediately below the mouth of the Caya; roads of communication were formed round the place, and the guns and stores were moved from Olivença, &c. to the depôts established agreeably to the instructions. No corps appeared to form the investment on the right of the river, and the garrison being left at full liberty to sally out, no preparations could be made to forward the northern attack.

It being extremely desirable to ascertain that the fords under the castle had not been destroyed, an officer (Lieutenant Forster) this

night examined the Rivillas, and ascended the rocky height of the castle nearly to the foot of the wall ; he reported that the fords of the Rivillas had not been touched, nor the ascent of the castle hill rendered difficult.

5th May.

The garrison made a very bold reconnoissance along the right of the Guadiana to the banks of the Caya ; which river having become fordable, it was to be apprehended they would return in force and destroy the flying bridge and the siege stores collected in the entrepôt at the Quinta de Falcata close to its right bank. To prevent such a misfortune the bridge was hauled on shore on the left of the Guadiana, and a Portuguese battalion, from the garrison of Elvas, occupied the Quinta.

8th May.

The investment of the town on the northern side was effected by Major-General the Hon. William Lumley. The arrangements were, that the 17th Portuguese regiment should march from Elvas, a squadron of Portuguese cavalry from Campo-maior, and a British brigade from Oguela ; the whole to unite at the Atalaya of Sta. Eugracia at 3 A. M. The Portuguese troops were punctual to the appointed hour ;

but the order to the British to move was not received by them till half past 3 A. M.—half an hour later than the period ordered for the conclusion of their march, and they did not reach Sta. Eugracia till 9 A. M.

At day-light, a squadron of about 60 cavalry, with a few infantry, sallied out of the place and took post about a mile in advance of Fort Christoval, where they maintained themselves till compelled to retire by the near approach of the investing corps. During their retrograde movements they continued to display great firmness and skill in disputing the ground, and as the country was quite open, and the artillery of Christoval supported them with great accuracy of fire, the investing corps lost much time and many men before they succeeded in driving them into the place.

The guns and stores were then moved to the depôts near Fort Christoval, and the commencement of the siege was fixed for the same evening.

ENGINEERS' MEANS PROVIDED FOR THE ATTACK.

Officers.

Lieutenant-Colonel Fletcher, commanding.

Captain Squire, directing Christoval attack.

1st Brigade—Captain Patton,

——— Dickinson (killed),

Lieutenant Thomson.

- 2d Brigade—Captain Ross (wounded),
Lieutenant Emmett,
———— Melville (killed).
- 3d Brigade—Captain By,
Lieutenant Forster.
- 4th Brigade—Captain Macleod,
Lieutenant Stanway.
- 5th Brigade—Captain Boteler (wounded),
Lieutenant Reid, (ditto).
- 6th Brigade—Captain Mulcaster,
———— Meinecke,
Lieutenant Wright.
- 7th Brigade—Captain Wedekind,
Lieutenant Hunt.
- Brigade Major—Captain John T. Jones.
Adjutant—Lieutenant Rice Jones.

Twelve officers of the line, volunteers for this service as assistant engineers, were attached in the proportion of one or two to each of the above brigades, and performed all the duties of engineers.

In contemplation of this siege, Lord Wellington, by an order from Alaiates, under date of the 6th April, had directed an ample proportion of engineers' stores to be forwarded from Lisbon to Elvas, but in the exhausted state of the country, carriage could not be procured for them: a few, however, of the most necessary articles were brought up on mules hired in Lisbon, and some tools were obtained on the

spot ; but the total was altogether inadequate to the contemplated operation. (2)

The supply for the attack of Christoval did not exceed 500 entrenching tools, 2,000 sand-bags, about 200 gabions,* 250 fascines, 7 platforms, a few planks, and 43 splinter proof timbers.

The engineers, however, in addition to 27 rank and file of their own men, were liberally granted 100 men from the troops to aid in the work and direct the working parties, and also 48 carpenters and 36 miners, similarly selected, all of whom were, for the period of the siege, placed under the orders of the commanding engineer exclusively, were bivouacked in the engineers' park, and rationed by the department.

ARTILLERY.

The ordnance arranged to be brought forward for the first operation of the siege was as follows:—

Attack of Christoval.

24-pounders	3
8-inch howitzers	2

* An abundant provision both of fascines and gabions had been made in the woods in the neighbourhood, but means of carriage could not be procured to bring them to the depôts before the commencement of the attack.

False attack of the Pardaleras.

24-pounders 3
 8-inch howitzer 1

False attack of the Picurina.

24-pounders 3
 8-inch howitzer 1

INFANTRY.

The besieging corps for the attack of San Christoval consisted of a British brigade, two battalions of Portugeze, and a battalion of militia, making a total of about 4,000 men. The corps for the attack of the castle consisted of the 2d and 4th divisions, mustering between 9 and 10,000 men.

JOURNAL OF THE ATTACK.

Night between 8th and 9th May.

The false attacks against the three detached works were begun: that against the Pardaleras consisted in opening the old French parallel on the Sierra del Viento, and throwing up a battery for four guns. That against the Picurina was nearly a similar undertaking on the hill of St. Michael, at 900 yards distance from it.

Attack of Fort Christoval.—Plate II.

Working party 400 men.

Covering party 800 ditto.

Ground was broken before the fort immediately after dark, and a battery commenced on the prolongation of the ditch of the right branch of the work, through which opening the scarp of a short flank (*m*) about 15 feet in length was seen to the bottom.

The battery was placed at the distance of 450 yards from the object, and was traced for the three 24-pounders and two 8-inch howitzers, having a trench of support on its right 100 yards in length.

The soil proved extremely hard and rocky, and the garrison opened a very heavy fire of shot, shells, and musketry, before the first gabion was placed; in consequence cover was only obtained to enable ten men to work in the battery at day-light, nor would the trench of support cover more than thirty men; the guard of the trenches was therefore placed behind the slope of the hills, in rear of the battery. Captain Ross and Lieutenant Melville were wounded, but resumed their duties before morning.

9th May.

The garrison kept up such an incessant fire throughout the day, both of artillery and musketry, that little could be effected towards the completion of the battery; and notwithstanding every precaution was taken to screen

the workmen and guard, many were killed or wounded, amongst the latter Captain Boteler.

Night between 9th and 10th May.

The working party was 400 men, and the guard of the trenches 600 men; the workmen were employed, as last night, to raise the battery, and to extend, widen and deepen the trench of support; but notwithstanding their utmost efforts the hard nature of the rock, which was found generally within a foot of the surface, prevented their obtaining sufficient cover for the guard of the trenches, and, in consequence, the greater portion of it was obliged to be continued on the reverse slope of the hill in rear of the battery.

10th May.

At 7 A. M. the garrison made a sortie with 700 infantry and two field-pieces, from Fort Christoval, and the line between it and the tête-de-pont. They gained possession of the battery (No. 2.) for a few minutes, till the guard of the trenches could advance from behind the hills, when they were instantly driven back with scarcely any loss to the besiegers; but the indiscreet ardour of some officers commanding detachments induced them to continue the pursuit to the very walls of the fort and

tête-de-pont, from which they received a most destructive fire of musketry and artillery, and sustained a loss of more than 400 in killed and wounded. Lieutenant Reid was wounded in the endeavour to protect the battery with the workmen. Lieutenant Melville was the same day killed.

Night between 10th and 11th May.

To prevent sorties in future, it was decided to send to Elvas for three heavy 12-pounders, and to throw up a battery for them, (No. 4.) in the exact line of enfilade of the bridge across the Guadiana, on a knoll at 700 yards distance from the tête-de-pont, and 100 men were employed upon it: 300 workmen were employed on the original work, and the breaching battery was completed and armed with three 24-pounders and two 8-inch howitzers.

11th May.

At 4 A. M. the battery opened; the guns directed to breach the small flank (*m*) of Fort Christoval, the howitzers to keep down the fire of the fort.

The Portuguese artillery-men were young and inexperienced, and after a few rounds their practice became very uncertain; whilst the garrison on the contrary kept up a heavy and

well-directed fire from Christoval, and from a battery (E) erected on the terreplein of the castle, against this single point, and in the course of the day disabled the three guns and one of the howitzers.

The battery to enfilade the bridge was nearly finished this evening. Captain Dickinson had his head carried off by a cannon shot whilst urging its progress.

Night between 11th and 12th May.

The events of the day having proved the insufficiency of the attack, it was decided to bring across the river four of the 24-pounders intended for the attack of the castle, and put them in battery against Christoval, to endeavour to keep under the fire of the place, and for that purpose a battery (No. 1.) for four guns was commenced on the left of the battery silenced.

The artillery during the night withdrew the four damaged pieces from No. 2, leaving the serviceable howitzer in battery only; and they armed battery No. 4. with the three 12-pounders from Elvas, and a howitzer from a field-brigade.

12th May.

The corps acting against Christoval, being now reduced (exclusive of militia) to 1800 men

fit for duty, became unequal to furnish the guard of the trenches and the requisite number of men to carry on the work ; and in consequence the labour in the trenches was nearly suspended.

Left bank of the Guadiana.—Attack of the Castle.

In order to distract the attention of the garrison, the batteries at both of the false attacks were completed, armed and brought into play. That against the Pardaleras certainly created great jealousy, as the garrison kept a constant fire upon it.

On the 10th, Sir W. Beresford agreed with the commanding engineer in the propriety of immediately commencing operations against the castle; but in the course of the day he received such information of the movements of a French corps for the relief of the place, as induced him to defer it. On the 11th such further information was received of the advance of the enemy, that orders were given to move the dépôt at the flying bridge across the Guadiana, from the left to the right bank, and to have every thing in readiness to retire. On the 12th the accounts brought in gave reason to suppose that the French were only manœuvring to amuse, and had no serious intention of advancing. The Marshal therefore ordered ground to be broken

that evening against the castle, on the plain bordering the left of the Guadiana.

Night between 12th and 13th May.

1400 men paraded for work, and 1600 men as a covering party. The parallel and the approaches to it were opened as far as the number of the workmen would extend, according to the plan laid down, and the troops had pretty well covered themselves by midnight, when an order was received to retire the workmen, and prepare to raise the siege, Marshal Soult having arrived at Llerena on his march to the relief of the place, and the junction of every man at Valverde being required to assemble a force sufficient to oppose him.

On the night of the 13th all the artillery was withdrawn from the batteries, the platforms taken up, and the splinter proofs removed. On the 14th every exertion was used to send the artillery and stores to the rear, and at night the fascines, gabions and materials which could not be moved were burned. At noon on the 15th, the whole of the siege artillery and ammunition being across the Guadiana, the flying bridge was drawn ashore. Part of the army had already marched to Valverde, and the 4th division and some Spaniards only remained on the left of the Guadiana to cover these operations.

On the 15th they also moved, and the siege was completely raised. At the moment the rear guard drew off, the garrison made a sortie in force, by which a Portuguese light battalion suffered severely, making the total loss during the operation above 100 killed and 650 wounded.

OBSERVATIONS.

At the period of this siege, the strength of Badajos had not been duly appreciated, and the means prepared for its reduction in artillery, ammunition and stores were altogether too inconsiderable:—The besieging force itself, particularly at the attack of Christoval, was also in a similar undue proportion of strength to that of the garrison, and totally unequal to furnish men for the various duties required of it; from this cause, and a deficiency of entrenching tools, it arose that a sufficient extent of ground to oppose a proper front of defence to the garrison could not be opened the first night and gave an opportunity for the sortie on the 10th which proved so disastrous. The Portuguese gunners, though brave and zealous, were very young and inexpert; and therefore, effectually to have opposed the enemy's fire, their weapons should have been much more numerous than those of the place, instead of being so much fewer. Every

thing else was on the same scale of inferiority, and it may be considered as fortunate that the approach of Marshal Soult's army caused the siege to be raised; as otherwise, after a further sacrifice of men in other feeble attempts, it would have brought itself to a conclusion from inability to proceed.

CHAPTER III.

SIEGE OF BADAJOS IN MAY AND JUNE, 1811.

*Plate II.**16th May.*

SIR W. Beresford, in a severe battle fought at Albuera, so completely discomfited the army Marshal Soult had assembled to relieve Badajos, that on the night of the 17th it retired on Seville without having communicated with the garrison.

19th May.

General Hamilton's Portuguese division resumed the investment of the town, on the left of the Guadiana.

The same day Lord Wellington returned to Elvas from the banks of the Coa, where the victory of Fuentes de Honor, and the consequent fall of Almeida, had so cleared Portugal of the invaders, as to admit of his detaching two divisions of infantry from thence to the Alemtejo. This measure gave a decided superiority of force to the allies on the Guadiana; but it was to be apprehended that as soon as they showed serious intentions of resuming the

attack of Badajos, Marshal Marmont (who had assumed the command of the army lately Massena's) would move towards the Tagus, to be at hand to co-operate for its relief. The siege could not be recommenced in less time than eleven days, in consequence of the artillery carriages having been so much shaken by their late removals as to require a thorough repair.* In that period Marshal Soult would be able to draw together all the disposable force under his command, and a few days more would form a junction between his army and that on the Tagus, when their combined forces would far exceed those of the British and Portuguese:—any thing to be undertaken against Badajos must therefore be of a rapid nature.

22d May.

Lord Wellington, after much consideration, determined to follow generally the plan decided for the last attack, correcting in the details such parts as experience had shown to be faulty: these improvements were to increase the means of attack generally, to oppose the fire of the place by counter-batteries of guns and mortars,

* The guns were dragged to Elvas on their own carriages by the Portuguese officers, contrary to previous arrangement, and the axletrees and wheels were in consequence very much injured.

to connect by a parallel, batteries No. 1, 2, and 4, to prevent sorties; and that the undivided attention of the place might not be directed as during the last operation against one attack, both were to be commenced at the same time.

ENGINEERS' MEANS PROVIDED FOR THE SIEGE.

Officers.

Lieutenant-Colonel Fletcher, commanding.

Captain Squire, director, attack of Christoval.

——— Burgoyne, ditto, attack of the castle.

1st Brigade—Capt. Patton (mortally wounded),
Lieutenant Thomson.

2d Brigade—Captain Ross,
Lieutenant Emmett.

3d Brigade—Captain By,
Lieutenant Forster (killed).

4th Brigade—Captain Macleod,
Lieutenant Stanway.

5th Brigade—Captain Meinecke,
Lieutenant Reid.

6th Brigade—Captain Mulcaster,
Lieutenant Wright.

7th Brigade—Captain Wedekind,
Lieutenant Hunt (killed).

8th Brigade—Lieutenant Rice Jones,
——— Marshall,
——— Hulme.

Captain John T. Jones, Brigade Major.

Also eleven officers of the line, volunteers as assistant engineers.

Since the last operation, a convoy of stores had arrived at Elvas from Alcacer do Sal, and there were now conveyed to depôts, close to the two attacks, 3,500 entrenching tools, 60,000 sand bags, 600 gabions, 600 fascines, a liberal supply of splinter-proof timber, platforms and plank, and all the carpenters' and miners' tools and small stores received from Lisbon.

The number of men selected from the line to aid the department was increased to 169, with 48 carpenters and 48 miners, and there were present 25 rank and file of the corps of Royal Military Artificers.

ARTILLERY.

Lieutenant-Colonel Framingham, commanding.

Want of time and the means of transport in the country caused the artillery supplies for this attack to be again confined to such as Elvas could supply, the ordnance at which place were all of brass, their carriages very unwieldy and defective, and the shot of the rudest nature; but by the resource and energy of Major Dickson, who was charged with forming the siege equipment, thirty 24-pounders, with 600 rounds of ammunition, and four 16-pounders, with 300

rounds, were rendered serviceable; also eight 8-inch howitzers, with 350 shells each, and four 10-inch howitzers, with 200 shells each; the wheels of the howitzers to be taken off, and the carriages placed on the ground so as to fire at 30° elevation, in lieu of mortars.

These were divided between the two attacks as follows:—

Attack of Christoval.

24-pounders	12
16-pounders	4
10-inch howitzers	2
8-inch ditto	4
24-pounders in reserve . brass .	4

Attack of the Castle.

24-pounders	14
8-inch howitzers	4
10-inch ditto	2

The experience of the late attack having created considerable doubts of the sufficiency of the Portuguese brass ordnance for the meditated operation, and also of the skill of the Portuguese gunners, orders were sent to Salvaterra to hasten forward to Elvas six iron Portuguese ship guns, prepared on garrison carriages as part of a proportion of ordnance to replenish the armament of that fortress, (3) and a company of British artillery was ordered up (20th May) from Lisbon, by the most rapid convey-

ance, to be distributed amongst the Portuguese, the proportions being

Portuguese artillery	. .	500
British ditto	. . . . .	110

INFANTRY.

The besieging corps for the attack of Christoval consisted of Major General Houston's division (the 7th), the 17th Portuguese regiment, and the Tavira and Lagos militia, making a total of 5,000 men.

The besieging corps for the attack of the castle, on the south of the Guadiana, consisted of Major General Picton's division (the 3d), and Major General Hamilton's Portuguese division, being about 10,000 men.

INVESTMENT OF FORT CHRISTOVAL.

25th May.

The 7th division, under the command of Major General Houston, invested the place on the right of the Guadiana. This operation was effected without loss, as the troops halted at some distance from Fort Christoval till dark, when the advanced positions were gained without opposition, and the necessary piquets and sentinels pushed out unperceived: the flying bridge was the same day fixed across the Guadiana, as at the last attack, and the stores and

materials were forwarded from Elvas to the depôt before the place.

27th May.

The 3d division (Major General Picton's) marched from Campo-maior, crossed the Guadiana by the ford above the town, and joined the investing corps on the left bank.

RECONNOISSANCE.

Officers from various points during the day obtained a sufficient view of the interior of the castle to ascertain that no work was going forward in it beyond strengthening or enlarging battery E,* and at night the banks and bed of the Rivillas and the ascent to the castle walls were again tried and found to be as accessible as during the former attack: indeed no alteration could be perceived either in the castle or fort Christoval, but the establishment of more fire, and the careful removal of the batteries and trenches which had been raised against the latter.

* As any retrenchment or second line in the castle would have rendered an attack of the meditated nature quite impracticable, a large telescope on a stand was carried up to the platform of the tower, in the centre of fort La Lippe, from which every evening a little before sunset, the whole of the interior of the castle was examined almost as satisfactorily as if on the spot.

JOURNAL OF THE ATTACK.—*Plate II.**Night between 29th and 30th May.*

On the 29th every preparation being so far advanced as to ensure breaking ground, on the following evening it was judged advisable to draw the attention of the garrison from the real point of attack, by resuming the false attack against the Pardaleras, and 300 workmen were employed on it this night and through the following day.

30th May.

The last divisions of the heavy ordnance marched from Elvas with a supply of ammunition equal to 300 rounds per gun and 200 per howitzer, being the quantity ordered to be kept in the park and batteries at one time.

*Night between the 30th and 31st May.**Attack of the Castle.*

Working party 1,600 men.

Covering party 1,200.

At dusk the commanding engineer, accompanied by two officers, marked out the line of the parallel; and the covering and working parties paraded in the engineer's park, where the latter were told off into divisions, and received their tools.

As soon as it became sufficiently dark to prevent discovery, the covering party marched from the park by the left road (*h a*) and was placed about thirty yards in front of the intended parallel, the main body (*c*) being in the centre, with strong detachments (*b*) on either flank: small piquets were pushed out in front of each battalion, and some few light infantry were scattered in advance of them; the piquets and light infantry had the strictest orders not to fire on the approach of any patrol or other small body.

The working party was divided into four divisions of four hundred men each. Two of these divisions marched by the centre road (*i e*), and on arriving at the trace of the parallel (*e*), one division filed to the right the other to the left, whilst the remaining two divisions of 400 each lined the approaches, (*g g*) which were more than one thousand yards in length. The number of men remaining for the parallel (800) would extend along only 1,100 yards of it from *a* to *f*, which was consequently all the front that could be opened this night.

As precisely the same details had been practised on the same spot whilst breaking ground on the night of the 12th May, the operation was conducted with the greatest regularity, and every man was in full employment before ten

o'clock. The garrison did not discover the parallel till day-light and then only opened from six guns upon it.

Christoval Attack.

Working party, 1,200 men.

Covering party, 800.

The following work was undertaken.

No. 1 Battery—for five 24-pounders, to enfilade the defences of the castle, and to assist in silencing its fire.

No 2 Battery—at four hundred yards distance from the covered way of the work, for four 24-pounders and four 8-inch howitzers; the guns to breach the exposed flank (*m*) of Christoval, the howitzers to be used against the defences generally.

No. 3 Battery—at 800 yards distance, for four 24-pounders, to ruin the parapets and defences of fort Christoval.

No. 4 Battery—on an elevated knoll at 700 yards distance from the tête-de-pont, for four 16-pounders, and two 10-inch howitzer-mortars, to enfilade the bridge across the Guadiana, impede the communication between the town and fort Christoval; and check sorties. The howitzer-mortars to be turned against fort Christoval, the tête-de-pont, or the castle, as circumstances should require.

Also a parallel to connect and support the above batteries.

The garrison discovered the working parties as soon as they attempted to break ground, and opened a heavy fire from the castle and fort Christoval, particularly directed against batteries No. 1 and 2: since the last operation every particle of loose soil had been scraped off the surface of the ridge forming the site of those batteries, and although the precaution was taken of placing a row of stuffed gabions in front of the workmen, still many casualties occurred in the early part of the night.

31st of May.

Attack of the Castle.

Working party, 1,000 men.

Guard of the trenches, 1,200.

The work of last night on the left of the Guadiana was in every part 3 feet deep and 3 wide at day-light, and the morning relief was employed to improve it. The garrison only fired at points where the workmen were much exposed, and before evening the parallel was everywhere six feet wide.

Christoval Attack.

Working party, 300 men.

Guard of the trenches, 800.

The sites of batteries 1, 2 and 3 were so

rocky that their terreplein could not be sunken except by the miners; every exertion had been used throughout the night to bring soil for their parapets from the rear, but it being 10 P. M. before the parties were fully at work, and day beginning to dawn at half-past three A. M., the interval of obscurity did not suffice to raise the solid mass of those batteries more than two feet. At day-light the garrison concentrated a heavy fire of guns and mortars on the gabions from the castle and fort and speedily knocked them over, after which the musketry from the covered-way of the fort picked off all who showed themselves in the battery and the workmen were withdrawn; but along every other part of the trenches sufficient cover was obtained for the morning relief to work.

Captain Rainsford's company of British artillery joined the besieging force from Lisbon, having been brought forward on mules sent to meet them at Estremoz.

Night between 31st May and 1st June.

Attack of the Castle.

Working party, 1,600 men.

Guard of the trenches, 1,000.

Of the 1,600 men furnished for the working party, 1,000 men were employed to perfect the work opened last night; and as it would have required all the remainder to extend the pa-

rallel to the point laid down for the breaching battery, it was decided, in order to save time, to begin the battery this evening at the point to which the parallel already extended, and No. 5, for fourteen 24-pounders to breach, and four 8-inch howitzers, and two 10-inch howitzers, to be used as mortars against the defences of the castle, was picketted out, and 600 men employed upon it and its communications. (4)

The garrison kept up a good deal of fire all night on the working party raising battery No. 5, but without materially impeding its progress.

Attack of Christoval.

Working party, 1,200 men.

Guard of the trenches, 600 men.

The workmen were distributed on the batteries and throughout the parallel.

As soon as it became dark additional gabions stuffed with bushwood were placed in front of No. 1 and 2 batteries, and rows of fascines were laid over them to secure the workmen; nevertheless the garrison caused such frequent casualties by a well directed fire of shot and shells, which went over or through the screen, that no great progress was made; but on the right No. 4 battery was finished and armed without loss.

1st June.

Attack of the Castle.

Working party, 1,000 men.

Employed to raise the batteries and perfect the parallel.

Christoval Attack.

Working party, 400 men.

Employed to perfect the parallel, batteries, and approaches. The miners employed to blast the rock to obtain an even bed for the platforms in No. 1 battery.

The garrison had now obtained the range of that battery and of No. 2 so accurately from some large mortars of sixteen or eighteen inches diameter, mounted in the castle, that every shell fell amongst the workmen. These enormous bodies descended with a noise, and made an explosion which startled the bravest, and being seconded by a constant fire of grape and musketry from the fort, materially interrupted the progress of the work. Luckily, however, No. 1 and 2 batteries being placed on the summit of a ridge, many of these huge shells rolled into the ravine and burst harmlessly, or otherwise they must have caused the utter destruction of the work.

Under these circumstances, as the progress made during these short nights in raising bat-

tery No. 1 with soil brought in sandbags and baskets from a distance was very slow: woolpacks were ordered to be purchased in Elvas to the value of three or four hundred pounds, to be used for its completion.

Night between 1st and 2d June.

Attack of the Castle.

Working party, 1,200 men.

Attack of Christoval.

Working party, 1,000 men.

The batteries, magazines and platforms at both attacks were nearly perfected in the course of the night.

The substance of the parapet of No. 1 was speedily formed with the woolpacks received from Elvas, and was found throughout the siege to resist the shot and preserve its shape remarkably well.

2d June.

The carpenters continued to be employed in completing the platforms and fixing the splinter-proof timbers for the magazines, which being perceived by the garrison, they increased their fire very considerably on the working parties throughout the day.

A distribution of the artillery officers and men

was made as follows by Major Dickson, directing the battering train.

Attack of the Castle.

OFFICERS.

Captain Rainsford,
 ——— Latham,
 Lieutenant Saunders,
 ———— Willis.

NON COMMISSIONED OFFICERS AND GUNNERS.

51 British,
 250 Portugeze.

being only a small reserve above two reliefs.

Attack of Christoval.

Captain Cleves,
 Lieutenant Hawker,
 ———— Connell.

with the same proportion of non-commissioned officers and gunners as for the attack of the castle.

Night between 2d and 3d June.

Attack of the Castle.

Working party, 400 men.

Battery No. 5 was completed in every particular and armed with

24-pounders	14
10-inch howitzers	2
8-inch do.	4
	<hr/>
	20

Attack of Christoval.

Working party, 950 men.

At dusk the workmen commenced opening the embrasures, which were in a perfect state before morning.

The garrison, probably fatigued by their increased exertions during the day, fired much less than usual, and all the batteries at both attacks were armed and the ammunition deposited in the magazines without any casualty, viz.

No. 1, with five 24-pounders,

No. 2, with four 24 do.

four 8-inch howitzers,

No. 3, with four 24-pounders,
which, with four 16-pounders and two 10-inch howitzers, previously put into No. 4 battery, made a total of 23 pieces of ordnance, including one of the reserve 24-pounders.

3d June.

Attack of the Castle.

At half-past nine A. M. the batteries opened against the castle and their fire was vigorously kept up till night.

From the excessive windage of the guns and distance from the point to be breached, (800 yards,) the practice was at first very inaccurate,

but by great care and attention in elevating and pointing each piece, the fire gradually became more certain and produced considerable effect, as before evening the outer face or wall of the castle had been beaten down, and a perpendicular bank of earth or clay appeared to be the only obstacle to a breach.—*Fig. 3.*

The firing during the day was at the rate of 120 rounds per gun and 50 per howitzer. Several casualties took place in the batteries, and Lieutenant Saunders received a severe contusion in the knee.

Two 24-pounders were rendered unserviceable this day, one by the bouche of the vent flying out, and the other by the muzzle drooping in consequence of its own firing.

The garrison kept up a heavy and incessant discharge upon the trenches.

Attack of Christoval.

The batteries against Christoval opened at the same hour as those against the castle, and from similar causes, the fire for some time was equally uncertain, but it was briskly kept up, and at length became steady and tolerably correct, and did considerable damage to the fort, particularly at the point intended to be breached.

The rate of firing during the day was about

100 rounds each for the 24-pounders, and from 40 to 50 rounds each for the 16-pounders and howitzers.

The garrison kept up a very heavy fire upon the batteries from fort San Christoval and the castle in the early part of the day, but that of the fort was nearly silenced before evening:—several of the artillery men were wounded in the batteries, and one 24-pounder became un-serviceable in No. 3 by the muzzle drooping.

An 8-inch howitzer in No. 2 was disabled by the fire of the garrison, and a 10-inch howitzer carriage in No. 4 broke from its own fire.

The gun disabled in No. 3 was replaced from the reserve.

Ammunition arrived this evening from Elvas to replace the expenditure of the day, and such continued to be the daily practice.

The transport necessary for this service, calculating 120 rounds per gun, 50 ten-inch, or 50 eight-inch shells per howitzer, was

Mules	. . .	160
Bullock carts	. .	115

Night between 3d and 4th June.

Working party, 1,200 men.

A sufficient number of workmen being now disposable, the parallel against the castle was prolonged to its right according to the original design, and battery No. 6, for seven guns, was

traced out at 650 yards from the breach. The embrazures and revetements of all the batteries were repaired.

4th June.

Attack of the Castle.

Working party, 600 men.

The fire was continued this day, with as much rapidity as the soft nature of the guns would admit, from the following pieces.

24-pounders	12
10-inch howitzers . .	2
8-inch howitzers . . .	4
	<hr/>
	18

The guns made good practice, but at sunset the bank of earth at the breach remained nearly as perpendicular as on the preceding evening. *Fig. 4.* Rate of firing, 100 rounds per gun and 50 per howitzer.

The garrison opened a very vigorous fire from several additional guns they had recently mounted on this side of the place, by which one artillery man was killed and three wounded.

Three guns rendered unserviceable this day, one from the fire of the garrison and two from drooping at the muzzle; one 8-inch howitzer and two 8-inch howitzer carriages disabled.

The failure of the brass guns became now so very alarming, that an interval of 7 or 8 minutes

was ordered between each round to give the metal time to cool.

4th June.

Attack of Christoval.

Working party, 50 men.

The fire on this side also was very lively this day. Battery No. 2 made excellent practice, and the flank intended to be breached was much injured: battery No. 1 was of some service against the castle, but from the length of range, and excessive windage of the guns, its practice was very irregular.

Ordnance in battery this day.

No. 1.—24-pounders . . .	5
No. 2.—24-pounders . . .	4
8-inch howitzers . . .	3
No. 3.—24-pounders . . .	4
No. 4.—16-pounders . . .	4
10-inch howitzer . . .	1
	<hr/>
	21

One 24-pounder in No. 1 unserviceable from drooping at the muzzle.

One 24-pounder carriage in No. 2 disabled.

One 10-inch howitzer carriage broke in No. 4: both this, and the 10-inch howitzer carriage broken yesterday, were occasioned by the Portuguese officer in command firing at a higher

angle than 30 degrees. No carriages could be obtained to replace them.

The breaching battery expended 100 rounds per gun, and the remaining guns from 40 to 80 rounds each. The howitzers fired about 50 rounds each.

Lieutenant Lopes of the Portuguese artillery and four gunners wounded.

Night between 4th and 5th June.

Attack of the Castle.

Working party, 1,000 men.

Battery No. 6, and the parallel between it and No. 5, were completed and seven guns were moved from No. 5 into No. 6.

Attack of San Christoval.

Working party, 80 men.

The embrasures, platforms, and revetements of all the batteries were repaired, which was the nightly practice throughout the siege on both sides the river.

5th June.

Attack of the Castle.

Working party, 500 men.

Employed to deepen the parallel, and to erect traverses in the batteries, the garrison having moved a gun in fort Christoval to bear

on this attack, which, from its very commanding height, plunged into every part of the batteries and approaches.

The 24-pounder which the bouche flew out of on the 3d, having been repaired, was brought into play this morning, and the fire was continued from the following pieces, No. 6 having opened at 10 o'clock.

No. 5.—24-pounders	3
10-inch howitzers	2
8-inch do.	3
No. 6.—24-pounders	7
	<hr/>
	15

The practice from No. 6 was extremely good, but the bank of earth at the breach still remained perpendicular.

The fire of the place on this side continued as brisk as at first; one gunner killed and one wounded.

The expenditure this day was about 90 rounds per gun and 50 per howitzer.

Two 24-pounders became unserviceable this day by their own fire.

Attack of Christoval.

Ordnance in battery this morning.

No. 1.—24-pounders	4
No. 2.—24-pounders	4
8-inch howitzers	3

No. 3.—24-pounders	4
No. 4.—16-pounders	4
	<hr/>
	19

Very apparent progress was made on the breach of San Christoval by this day's firing.

A brisk discharge was kept up from the other batteries against the castle and fort Christoval, but without much effect against the former. The fire from the fort, however, had greatly diminished.

The expenditure this day was about eighty rounds per gun and fifty per howitzer.

One gun in No. 1 and one in No. 2 disabled, from drooping at the muzzle. Two gunners wounded.

Night between 5th and 6th June.

Attack of the Castle.

Working party 1400 men.

Intelligence having been received that seven iron guns would immediately arrive at Elvas from Lisbon, and the brass guns continuing to fail, the parallel was again extended to its right, and battery No. 7 was traced out for them at 520 yards from the breach. The working party was chiefly employed on this new battery, the approaches to it, and the

parallel of support. At this distance the heavy grape which the garrison showered down from the castle annoyed the workmen extremely, and caused many casualties.

Attack of Christoval.

Working party 250 men.

The fire of the place continuing nearly as brisk as at the commencement of the attack, an addition was made to No. 1 battery for one gun and two howitzers, and an addition for one gun to No. 2, being all the ground would admit; the howitzers were brought from No. 4 battery, where they had replaced the mortar howitzers; and as the fire of No. 3 was very ineffectual it was dismantled, and its artillery moved into No. 1 and 2, to replace the guns become unserviceable.

6th June.

Attack of the Castle.

Working party, 600 men each relief. Employed to raise battery No. 7, and complete the parallel and approaches.

The garrison during the night had kept large parties at work in rear of the castle-breach and on the battery E, and had created so much cover that their workmen were able to continue their labours throughout the day.

Ordnance in battery this morning.

No. 5.—24-pounders	2
10-inch howitzers	2
8-inch ditto	3
No. 6.—24-pounders	7
	<hr/>
	14

The fire against the breach continued from 9 guns during the whole of this day, and much more progress was made than in the two preceding days, the breach in the evening appearing practicable for a man to get up.

Expenditure 90 rounds per gun, and 50 per howitzer. One 8-inch howitzer disabled this day. Three gunners wounded.

Another gun and howitzer in Fort Christoval brought to bear on batteries No. 6 and 7, and the trenches of communication, which caused a number of casualties among the guard and working parties. The fire of the mortar howitzers was, in consequence, directed against Christoval to check that of the garrison.

Attack of Christoval.

Ordnance in battery this morning.

No. 1.—24-pounders	4
8-inch howitzers	2
No. 2.—24-pounders	6
8-inch howitzer	1
No. 4.—16-pounders	4
	<hr/>
	17

The fire against Christoval, &c. continued during the whole day, and the breach in the evening was considered practicable.

Expenditure 80 rounds per gun, and 50 per howitzer.

One 24-pounder and one 8-inch howitzer in No. 2 rendered unserviceable by the fire of the place.

Lieutenant Hawker, of the Royal Artillery, who had never quitted the batteries No. 1 and 2 since the commencement of the fire, was killed this morning. One gunner was also killed, and one wounded, in the course of the day.

Night between 6th and 7th June.

Attack of the Castle.

Working party 800 men, employed as last night and repairing the batteries.

The carpenters finished the platforms in No. 7, and perfected the magazines.

Attack of Christoval.

The breach in the flank had been closely examined during the last night by Lieutenant Forster, who considered it to be then sufficiently practicable; and this day's firing having much improved its appearance, it was determined to assault it at dark; and the following

disposition for the assault and lodgement was issued with the sanction of General Houston.

ASSAULT.

1. The detachment will consist of two companies of grenadiers—one company will form the assaulting party, the other the reserve.

2. The assaulting party will be divided into two equal detachments, the second following at 100 paces from the first; the advance of the assaulting party will consist of an officer and 25 men, who will, on the appointed signal, mount the breach and take immediate possession of the gorge of the work and its entrance.

3. The advance of the assaulting party will be instantly followed by the remainder of the 1st detachment, and after the whole have entered and cleared the work, they will extend themselves from one side of the fort to the other, where they will remain covered as much as possible from the fire of the castle.

4. The advance of the assaulting party will be accompanied by an officer of the Royal Engineers, with

2 ladders,

2 crow-bars, and

2 broad axes,

and 10 ladders will be issued to the 1st detachment as a reserve, if found necessary.

5. The company forming the reserve will place itself under the crest of the glacis on the east face of the work, and continue to divert the attention of the garrison of the fort by a brisk fire of musketry.

6. The whole of the guard of the trenches, or at least 300 men, will occupy the ravine between No. 2

and Fort Christoval, and will detach fifty men to the west side of the fort, which detachment, advancing as far as the ditch of the ruined intrenchment between Fort Christoval and the bridge-head, will cut off that line of communication with the town.

7. One company, with one 6-pounder and a howitzer, will advance along the lower-road in the plain east of the height of Christoval, so as to interrupt any communication by boats across the Guadiana.

8. It should be clearly understood that the assaulting party use only the bayonet, and that not a single musket is fired on our part, unless the enemy, by their fire, make our intentions evident. The company of grenadiers to the east, and the 50 men detached from the guard of the trenches on the west side of the fort, will then endeavour to distract the attention of the garrison by rapid discharges of musketry against the parapets of the work.

LODGEMENT.

One hundred workmen to be employed in the lodgement in Fort Christoval, to be divided into two parties—50 men in advance, and 50 men in reserve: 25 of the first detachment will carry pickaxes and 25 shovels, the whole of the hundred men will carry a small gabion; besides these there will be six carpenters and six miners; the carpenters with 3 saws and 3 axes, the miners with 4 crow-bars, besides miners' tools.

After the troops have gained possession of the work the workmen will be employed in forming a covered trench across the whole terreplein fronting the castle, or in forming a sap along the rampart, which, com-

workmen were then distributed along the approaches to the battery and the trench of support to deepen them, as the artillery in Fort Christoval plunged completely into both. During the morning three 24-pounders were moved into No. 7, viz. two guns from No. 5, and one from No. 6, and it opened its fire in the afternoon. After this alteration the ordnance in battery was as follows :

No. 5.—10-inch howitzers . . .	2
8-inch ditto . . .	2
No. 6.—24-pounders . . .	6
No. 7.—24-pounders . . .	3
	<hr/>
	13

The fire this day certainly improved the breach, but the continued resistance of the scarp of earth gave reason to fear it would not become properly practicable for some time : the 8-inch shells fired against it would not penetrate, but they dropped to its foot and burst amongst the rubbish.

This day the remaining reserve 24-pounder was brought from the northern side to this attack, and at night put into No. 6.

Six iron 24-pounders (Portuguese naval guns) on garrison carriages, arrived from Elvas this morning ; they were run into No. 7 at night, as also an 8-inch howitzer from No. 5.

The fire of the place was now sensibly diminished, but in the course of the day Captain Barreiros and two gunners were wounded.

Attack of Christoval.

At day-light Lord Wellington, attended by the commanding engineer, went to the advanced batteries to examine the opening made in the flank (*m*), and having convinced himself that the scarp wall was sufficiently seen from the batteries to be effectually breached, ordered the attack to be continued.

Ordnance in battery this morning.

No. 1.—24-pounders	. . . . 4
8-inch howitzers	. . . . 2
No. 2.—24-pounders	. . . . 5
No. 4.—16-pounders	. . . . 4
	<hr/> 15

Soon after day-light the fire was renewed on the breach with as much activity as the frail nature of the guns would admit, and notwithstanding all the precautions of allowing the prescribed interval between each round, one 24-pounder in No. 1, and one in No. 2, were unserviceable at sun-set, from drooping at the muzzle. Only 7 guns and 2 howitzers, therefore, remained serviceable in No. 1 and 2.

The four 16-pounders in No. 4 continued in good order, being only fired from time to time to enfilade the bridge and keep the tête-de-pont in check.

Two gunners killed and one wounded this day in the batteries.

Night between 7th and 8th June.

Soon after dark a working party of the garrison was discovered clearing the castle breach, but a fire of grape shot being immediately opened upon them from No. 6, they withdrew ; nevertheless the grape shot was continued at intervals throughout the night. At Christoval a fire of case shot was kept up during the night on the breach.

8th June.

Attack of the Castle.

Ordnance in battery this morning.

No. 5.—10-inch howitzers . . .	2
8-inch ditto . . .	1
No. 6.—24-pounders . . .	7
No. 7.—24-pounders . . .	9
8-inch howitzer . . .	1
	<hr/>
	20

Being sixteen 24-pounders and one 8-inch

howitzer employed against the breach, and two 10-inch mortar howitzers and one 8-inch howitzer against the defences, &c.

The iron guns, although far from correct in their fire, were very superior to the brass 24-pounders, and the breach at the end of this day's fire put on a more favourable appearance, for though the bank of earth still preserved its upright character, the great quantity of rubbish collected at the bottom of it, apparently formed an easy ramp of some width to within a few feet of the top, so as to afford every prospect of its very speedily being practicable.—*Fig. 5.*

This day two brass 24-pounders in No. 6 became unserviceable from drooping at the muzzle, and one iron 24-pounder in No. 7 was disabled by the fire of the garrison, and three gunners wounded.

Attack of Christoval.

Ordnance in battery this morning.

No. 1.—24-pounders	. . . .	3
8-inch howitzers	. . . .	2
2.—24-pounders	. . . .	4
4.—16-pounders	. . . .	4

13

A continued fire was kept up on the breach of San Christoval, but in the evening it was not

again deemed practicable. The fire of the garrison this day was very much slackened, but they kept parties steadily at work in the castle. One gunner only wounded. A fire of case-shot was kept up on the breach during the night.

Night between 8th and 9th June.

The fords of the Rivillas and the approach to the castle breach beyond the river were most strictly examined this evening after dark by Captain Patton, (the officer named to conduct the columns to the assault,) attended by a trusty serjeant and three intrepid men.

A French piquet of nearly similar numbers, posted near the spot, kept themselves concealed till the reconnoitring party retired, when they started up, fired, and mortally wounded Captain Patton, he was, however, able to report on being brought into the trenches, that no obstacle whatever had been created in the bed of the river, or on the bank beyond it. After this reconnoissance a continued fire of grape and case shot, both from No. 6 and No. 7, was kept upon the breach during the night, but without the requisite effect, for the garrison succeeded in clearing away the rubbish from the foot of the breach, so as to expose to view in the morning a considerable height of the perpendicular bank of earth. This must be attri-

buted to the bad quality of the Portuguese grape and case, the iron and lead balls it was manufactured with being exceedingly small, so as to be of little or no use at 500 or 600 yards distance from the object.

9th June.

Attack of the Castle.

Ordnance in battery this morning.

No. 5.—10-inch howitzers	2
8-inch ditto	1
6.—24-pounders	5
7.—24-pounders	8
8-inch howitzer	1
	<hr/>
	17

The fire was continued with all possible activity throughout the day, and by the evening the breach was in a much better state than before the garrison cleared it; indeed it now wore a very favourable appearance, the rubbish at its foot having encreased so much as apparently to form a road into the castle.—*Fig. 6.*

One gunner killed and one wounded.

One brass 24-pounder in No. 7 became unserviceable from drooping at the muzzle.

A quantity of 3-pounder shot having arrived from Elvas, it was prepared to be used as grape against the breach during the night, by putting

eight or ten shot into a sand bag, which formed powerful grape fired from the 24-pounders.

Attack of Christoval.

Ordnance in battery the same as yesterday,
viz.

24-pounders	7
16-pounders	4
8-inch howitzers	2
	<hr/>
	13

The fire was kept up this day with such effect, that by the evening the breach in the flank of Christoval was considered to be again practicable, and the assault was ordered to take place as soon as it should become sufficiently dark for the party to approach unobserved. The fire of the place had now become comparatively trifling to that maintained at the commencement of the siege, and no casualty occurred in the batteries to day.

Night between 9th and 10th June.

DISPOSITION FOR THE ASSAULT OF FORT
CHRISTOVAL.

1. The detachment for this service will consist of 400 men, and will be distributed in the following manner.
2. The assaulting party will consist of 200 men, and will be divided into two detachments of 100 men each;

they will march from the rear of No. 1 and 2 together, having an interval between them of fifty paces: after arriving at the foot of the heights of Christoval, the front detachment will move up the hill in a direct line for the breach, while the other detachment marches directly for the salient angle of the work: a subaltern and twenty-five men will be detached from each party, and should always advance with an interval of about thirty paces between it and the remainder; after arriving at the palisades the subaltern and twenty-five men of each party will proceed to the assault with all possible dispatch, and as soon as the advance shall have nearly entered the work, the remainder of the 100 men of each party will follow and take possession of the fort.

3. The advance against the breach will be accompanied by six ladders, the advance against the salient angle by ten ladders.

4. During the assault a detachment of thirty men will keep up a brisk fire of musketry against the parapets of the long face of the work between the breach and the salient angle.

5. Seventy men will march along the lower road under the height of Christoval and will halt in the lower ground about 300 yards from the east end of the height where it meets the river. At that point will be placed a corporal and three men to observe the passage of boats across the river, and if any should attempt to cross over, the detachment of seventy men will advance and prevent their landing, the object of this detachment being to cut off the communication across the Guadiana.

6. One hundred men will move from the Campo-

maior road, nearly across the centre of the parallel, and advance upon the west front of the work, keeping up a brisk fire of musketry against the parapets, and at the same time checking the communication between the tête-de-pont and the fort.

7. The guard of the trenches will move forward to the hollow between No. 2 and Fort Christoval, and be ready to act as a support as circumstances may require, detaching thirty men, who shall enter the advanced covered way and keep up a fire against the parapets of the work.

8. Further to distract the attention of the enemy, fifty men will be detached from the guard of No. 4, about 300 yards to the front, which shall keep up a fire against the parapets of the tête-de-pont. The officer charged with this service will take care to place his men (dividing them into two parties of twenty-five men each) as much as possible in the flanks of the work, so as not to be exposed to its artillery.

9. As soon as the interior is entered by the whole of the storming party, the detachment of thirty men which kept up the fire against the parapets of the long face of the work will enter the breach of the loop-holed wall and cut off the retreat of the garrison.

DISPOSITION FOR A LODGEMENT IN FORT ST. CHRISTOVAL.

1. *Officers employed*.—Capt. Ross, Royal Engineers.
Lieut. Hunt, ditto.
Lieut. Davey, assistant Engineer
Number of workmen, 100.

2. Lieutenant Hunt will follow in rear of the advance of the storming party, which moves forward to the breach, and will be accompanied by twelve men, carrying four ladders, two carpenters with saws and axes, and four miners with crow-bars.

3. As soon as the advance have made good their entrance into the work, Lieutenant Hunt with the two carpenters and four miners will follow the party and endeavour to overcome any obstacle which may oppose their progress. He will reconnoitre the work with all possible dispatch, and will search the magazine, and destroy any lighted match or portfire he may meet with.

4. As soon as the whole of the storming party have entered the fort, and we have completely established ourselves, Captain Ross will advance with the working party, which will be employed in the following manner.

5. The working party will be divided into two detachments of fifty men each—twenty-five of the 1st detachment will carry pickaxes, and twenty-five shovels. The whole of the 100 men will carry a small gabion, and Captain Ross will also be accompanied by twelve men of the brigades now attached to the park.

6. After the troops have gained possession of the work, the workmen will be employed in forming a covered trench across the whole terreplein of the fort, or in forming a sap along the rampart, which, commencing in front of the breach, shall continue from thence to the demi-bastion on the opposite side; thus forming a covered communication from one side of the fort to the other.

7. Every exertion must be made to render the sap

cannon proof before the morning, and to make the breach practicable for the admission of artillery.

8. The nature and direction of the sap proposed must wholly depend on the form of the interior of the work.

9. Captain Ross will direct the tools and materials to be moved to the depôt in the course of the day, in rear of Nos. 1 and 2.

EXECUTION OF THE ASSAULT.

The assaulting party paraded in the ravine behind batteries No. 1 and 2 immediately that it became sufficiently dark for concealment, and every precaution of firing on the breach was adopted to prevent a recurrence of its being cleared, and sixteen ladders, from twenty-five to thirty feet long, were provided to aid the assault by an escalade; but circumstances had changed since the former attack—the French were then unprepared, and had only seventy-five men in the fort; this evening they were on the alert, and had an ample garrison in it, who, elated by recent success, received the assailants with cheers and invitations to approach. The advance moved forward at 9 P. M. under a most rapid fire of musketry from all the parapets of the work, which opened upon them the moment they quitted the shelter of the batteries. The first division of the assaulting party followed

at the prescribed distance, with the utmost regularity, notwithstanding the heavy fire to which they were exposed, and descended into the ditch. Lieutenant Hunt of the Engineers, conducting this division, was killed on the glacis. Major M'Geachy, the officer in command, immediately afterwards fell, and the next in seniority and many men were at the same moment disabled. The remainder, however, followed the advance towards the breach; but an immense number of shells and combustibles, rolled down upon them from the parapets of the fort, added to the cool bravery displayed by the defenders, checked their efforts and saved the breach.*

The second detachment of 100 men advanced with the same steadiness as the first, and descended into the ditch without much loss. They then applied the ladders to the scarp and succeeded in rearing most of them. The men

* No authentic account could be obtained of the proceedings of this party after they descended into the ditch; some on their return reported that the breach had been again cleared and was impracticable; others said that the attempt was not made on the breach, but on the face of the right demi-bastion (*n*) which had been much injured by stray shot fired at the flank, and in the night might be readily mistaken for a breach: such was most likely the case, but it is only justice to add that the attempt to force in, wherever made, appeared at the moment most spirited and most determined.

difficult situation of the breach in the castle, the imprudence of attempting to storm it when practicable without first having possession of Christoval, on account of an entrenchment which the garrison had found time to construct within the breach, and finally the approach of the French armies in such force, that prudence could not allow him to be caught by them in the midst of a siege.

Orders then being given to raise the siege, the necessary measures were taken on both sides the river to carry them into execution. As soon as it became dark, the operation of getting the guns, &c. out of the batteries and sending the stores to the rear commenced; nor were the garrison idle, for during the night they completely cleared away the rubbish from the upper part of the castle breach, and on the 11th at day-light, the bank of earth presented a perpendicular front ten feet in height.

Night between 11th and 12th June.

Such was the exertion used by the several working parties that by the morning of the 12th the whole of the guns, stores, ammunition, entrenching tools, sand bags, platforms, &c. had either reached Elvas, or were at such a distance as to be in perfect safety under every circum-

stance: the splinter-proof timbers, gabions, fascines, &c. not worth moving, and which might prove of service to the garrison, were then burned, the troops withdrawn from the trenches, and the siege raised; but the blockade continued till the 16th, on which day the allied army concentrated at Albuera, previously to retiring across the Guadiana, and on the 19th the united forces of Marshals Soult and Mar-mont entered the place.

CASUALTIES DURING THE SIEGE.

The loss of the besiegers during the operation was 9 officers and 109 men killed, and 25 officers and 342 men wounded and prisoners. That of the artillery was as follows:

Officers.

Lieutenant Edmund Hawker, killed,
Lieutenant William Saunders, wounded.

Officers, Portuguese Artillery.

Captain Antonio Veller Barreiros, wounded,
Lieutenant Joze Baptista de Silva Lopes,
ditto, dangerously.

	Killed.	Wounded.
Non-commissioned officers and privates, Royal Artillery . . .	0	4
Ditto ditto Portuguese ditto .	6	28
Total	6	32

ORDNANCE DISABLED.

The number of pieces of ordnance disabled during the siege was as follows :

	24-pounder guns.			16-pounder gun.	10-inch howitzers.	8-inch howitzers.	General Total.
	Iron.	Brass.	Total.				
Disabled by the fire of the enemy . . .	1	2	3	..	..	3	6
Ditto by their own fire		15	15	..	2	1	18
	1	17	18	..	2	4	24

being eighteen guns and six howitzers rendered unserviceable, and the vent of the other thirteen brass 24-pounders being much enlarged and in a very bad state. (5)

The expenditure of ammunition was as follows:

	24-pounder round shot.	24-pounder grape shot.	16-pounder round shot.	10-inch shells.	8-inch shells.
Attack of Fort Christoval .	5950	200	1134	62	989
Attack of the Castle . . .	8419	441	..	640	1090
	14369	641	1134	702	2079

The quantity of powder expended was 4,344 arobas, at 32 lbs. each, or about 1,545 English barrels.

OBSERVATIONS.

In stating the project for this attack, it was shown to have been adopted from the want of time and means to undertake any other of a more certain nature; and a consideration of the details will make it appear that even this operation, the slightest possible, failed from exceeding all the means that could be procured for carrying it through in men, artillery and stores.

A practicable breach having being formed in fort Christoval at the point selected, it only required the aid of a co-operating fire on the defences, with a body of sappers, and the necessary fascines and gabions, to have rendered the reduction of the work certain; for in the period between the 30th May, the night of breaking ground, and the 6th June, the night of the assault, there was abundant time to have carried a sap forward to the glacis, and to have established such a close front of musketry fire as should have prevented the garrison from clearing the breach or showing themselves above the parapets during the attack. Then as the troops would have been able to advance under cover to the assault, it might have been made in day-light, and with a certainty of success.

On the fall of Christoval depended the issue of the siege, for it would have been a most imprudent act to have led troops to assault the castle whilst fort Christoval, which commanded the foot of the breach and the whole approach to it, remained in the hands of the garrison; therefore the circumstance of the breach in the castle wall having been so long in forming is of little account, as it would not under any circumstances have been assaulted till Christoval fell. The principal cause of the great length of time occupied in rendering the castle breach practicable may be traced to the adventitious circumstance of the enclosure of the castle, instead of an ordinary wall, proving to be a natural bank of earth cut perpendicularly down, and merely faced with bricks laid in a hard and durable cement, to resist the injuries of the weather. This facing came down in the first day's firing, but the bank behind it remained perpendicular, and to the very last it peeled off in perpendicular sections. See *Figs. 3, 4, 5, and 6, Plate II.*

It is admitted that the breaching batteries, considering the quantity and quality of the ordnance to arm them, were much too far from the point to be breached. Nevertheless they did succeed in forming a practicable breach in seven

days' firing, and would have done so much sooner had not the want of a sufficient co-operating fire on the defences, and the scarcity of materials, prevented the approaches being pushed forward, so as to establish a musketry fire on the breach and prevent the garrison from clearing the rubbish from its foot. Indeed there is reason to believe that more than once the defenders rendered the effects of a day's battering nugatory by the work of a few men in the night, and if so, no judgment can be formed of what might have been the efficiency of good iron guns at such distances, from the apparent effect of these batteries. This clearance was certainly the case at Christoval, and the exertions of a few sappers between dusk and midnight caused the failure of the first assault of the breach. No blame can be imputed to either officers or men employed on that service. Each individual did his duty, and as a body they showed the most distinguished courage.

The ordnance employed at this siege, besides being of an excessively bad quality, was also totally inadequate in quantity to the reduction of such a fortress as Badajos, although every thing Elvas could supply was drawn from that garrison. The guns, it has been stated, were of brass, false in their bore and already worn by

previous service, and the shot were of all shapes and diameters, giving a windage from one tenth to half an inch. The howitzers used as mortars were defective equally with the guns: their chambers were all of unequal size, the shells did not fit the bore, and their beds were unsteady, so that the practice was necessarily vague and uncertain and they proved of little service. The Portuguese gunners were young and inexperienced, and the number of British mixed with them far too few; both however evinced the greatest ardor and bravery,* and it is highly creditable to them and to the officers to have effected so much as they did with such crude materials and under such diadvantageous circumstances.

After the failure of the second assault of the breach in fort Christoval, no hope could be entertained of the reduction of the place, as the shot collected for the siege were nearly all expended, and no more could with propriety be

* Some of the artillery-men never quitted the batteries during the whole time they were open; and two Portuguese, named Oliveira and Ramos, received a special reward by order of Lord Wellington for the coolness and intrepidity they displayed in removing from the entrance of a powder magazine a lighted shell of heavy calibre, which had fallen there, and which burst in a few seconds after they quitted it.

drawn from Elvas, likely to become in a few days an uncovered frontier town, and perhaps invested by an enemy. Further, twenty-four pieces of ordnance with their carriages had been disabled, and there were no others to replace them, so that had no army been approaching to relieve the place, and time had been abundant, means were wanting to make any greater effort.

The most critical examination of the operations of this siege will not allow of blame for its failure being thrown on any one. From the general to the soldier each did his duty; nor should want of success discredit the original project. It must be admitted that there was a judicious application of all the means that could be collected for the reduction of Christoval. On trial those means proved insufficient; many of the causes of their insufficiency could not have been foreseen, and others, if foreseen, could not have been remedied; all that skill and bravery could effect was done.

The successful resistance of fort Christoval prevented the complete execution of the project of attack; but such part of it as was carried through augured favourably for the remainder, and a candid consideration will, perhaps, grant, that this attempt to recover

Badajos, although bold and hazardous in the extreme, and contrary to all rule, had much merit as a feasible expedient, and deserved a happier result. (6)

OPERATIONS ATTENDANT ON RAISING THE SIEGE.

16th June.

The large boats used as flying bridges on the Guadiana were transported to Elvas, but the tin pontoons were delivered over to General Blake, to aid him in some operation lower down the river.

17th June.

The army began to recross the Guadiana by the fords above the town, and head-quarters were transferred to Elvas.

It was this day arranged that a proportion of entrenching tools for 300 men, carried on 30 mules, should in future move with head-quarters, and a selection of the most useful implements and small stores was made to accompany the tools.

19th June.

The armies of Marshals Soult and Marmont entered Badajos. The head-quarters of the allies moved to St. Vicente, and the troops were placed en bivouac on the banks of the Caya.

20th June.

The corps left in Beira under Sir B. Spencer having kept a parallel movement with Marshal Marmont's army from the Coa, reached Portalegre, and the whole of the allied forces were concentrated between that place and Campo-maior.

21st June.

Lord Wellington having decided to give battle to the two marshals, should they attempt to penetrate into Portugal, selected a position on the left of Campo-maior for that purpose, and ordered the intervening space between its right and the town to be strengthened with works, and this afternoon working parties of the troops were employed on that duty.

22d June.

Marshals Soult and Marmont made a reconnoissance close to Campo-maior with a strong body of cavalry and light artillery, and in consequence the army formed in masses behind the heights selected for the position, in readiness to occupy their allotted ground; but the enemy, after driving in the cavalry posts, halted till evening on some heights, at the distance of about 1,200 yards from the position, and the troops did not show themselves.

This reconnoissance seeming to be the prelude to a general action, working parties were employed all night to strengthen the position by means of emplacements for guns, &c.

From the 22d to the 26th June.

The labour on the position proceeded regularly every night: the emplacements were converted into redoubts, and the redoubts between the position and town were strengthened and connected with the dismantled outwork on the north-east of the place, which was also put into a state of defence.

27th June.

The works being complete, and the French armies beginning to retire from Badajos, the working parties were discontinued.

29th June.

A captain and three subalterns, in command of a detachment of 60 rank and file of the corps of royal military artificers, disembarked at Lisbon, and at the same time a train of 24 pontoons. In consequence of this addition to the engineer soldiers, the men of the line, hitherto acting as overseers and mechanics on the lines of Torres Vedras, were ordered to rejoin their

respective battalions, and their duty to be taken by the royal military artificers.

30th June.

One or two officers of the engineers being attached to each division of the army, the remainder of the officers collected for the recent siege returned to the duties of the lines, Oeyras, the Almada position, Peniche, Abrantes. &c.

CHAPTER IV.

SIEGE OF CIUDAD RODRIGO.

PRELIMINARY MOVEMENTS AND ARRANGEMENTS.

1811.

LORD Wellington, after raising the siege of Badajos, retained his army on the Caya, to cover the Alemtejo provinces till the forces of Marshals Soult and Marmont should separate, and during that time, foreseeing the probability of some opportunity offering to recover Ciudad Rodrigo, gave orders for a battering train, just arrived from England, consisting of

					Ammunition Rounds, grape, case, &c. included..
24-pounders iron	.	34	.	.	644
18-pounders do.	.	4	.	.	440
10-inch mortars do.	.	8	.	.	525
5½-inch howitzers do.	20	.	.	.	348
5½-inch mortars brass	10	.	.	.	348
8-inch howitzers do.	2	.	.	.	215

 78

and a due proportion of engineer stores, to be

sent from Lisbon by sea to Oporto, to be moved in boats up the Douro to Lamego, and from thence by land carriage to Villa de Ponte, within 60 or 70 miles of the Agueda.

On the 19th July, the arrival of the battering train, &c. in the Douro being known to Lord Wellington, he assembled at his head-quarters at the Quinta da St. Joao, near Elvas, the commanding officers of artillery and engineers, and the commissary general, and having stated to them his views and means, directed that an officer of artillery and engineers should immediately proceed to Oporto, to make the necessary arrangements for moving the guns and stores of their respective services towards the frontier with as little delay as possible, and then drew up the following memorandum for the guidance of the three departments.

MEMORANDUM.

19th July.

1. The heavy ordnance and stores and engineers' tools, now embarked in the transports in the Douro being required at Ciudad Rodrigo, measures must be adopted to move them thither.
2. They must be removed into boats at Oporto, and carried by water to Lamego.
3. At Lamego they must be landed, and the ordnance removed at once by 384 pairs of bullocks to

Trancoso. The stores, that is to say, 350 rounds for each 18-pounder and 24-pounder gun, and 160 rounds for each 10-inch mortar, to be removed there on 892 country carts.

4. The engineers' stores to be removed to Trancoso upon 200 country carts.

5. The 892 carts mentioned in No. 3 to be unloaded at Trancoso, and to return to Lamego to bring up to Trancoso the remainder of the stores.

6. Upon the arrival of the second quantity of the stores at Trancoso, the whole ordnance and the stores for 350 rounds a gun and for 160 rounds each mortar, in 892 carts, and engineers' stores in 200 carts, to move to Ciudad Rodrigo.

7. The ordnance stores to be unloaded at Ciudad Rodrigo, and the 892 carts to return to Trancoso for the second convoy.

8. Colonel Framingham to order from Lisbon to Oporto 1,600 barrels of powder, to complete the quantity at that place to what will be sufficient for the shot and shells with the battering train.

9. Major Dickson is requested to proceed to Oporto, in order to superintend the removal of the ordnance and stores from thence, and Colonel Fletcher will send there an officer of the engineer department.

10. These officers will act in concert with the gentlemen employed by the commissary general to collect the necessary boats and carts, and the matter should be arranged in such a manner as that the stores could be at Lamego at the time the carts would be ready to remove them.

11. The two companies of British artillery now at Lisbon to be ordered to Oporto by sea.

12. Probably the time will take

- 24 { 12 days for Major Dickson's journey to Oporto.
 6 days for the removal of the ordnance and stores to the boats.
 6 days from Oporto to Lamego, (Pezode Regoa.)
 8 days from the boats moving up the hill to Lamego.
 4 days from Lamego to Trancoso.
 4 days carts to return and load.
 4 days second trip to Trancoso.
 6 days to Ciudad Rodrigo.
 6 days to return to Trancoso.
 6 days to bring the second quantity of stores to Ciudad Rodrigo.

62 days

W.

On the 23d July, Marshal Marmont's forces having recrossed the Tagus, and Marshal Soult's forces having retired on Seville, Lord Wellington, in furtherance of the meditated enterprise against Rodrigo, moved his army to Portalegre; and in the middle of August cantoned it in the country between the Coa and Agueda, placing one division beyond the latter river, and fixing his head-quarters at Fuente Guinaldo, within a few hours' march of the fortress, so as to cut off all its communications.

Looking forward to a rapid siege, and anxious to supply the deficiency of sappers, so severely felt during the recent attack of Christoval, his Lordship ordered a party of 200 men, volunteers

from the line, to be daily instructed in the practice of sapping, making and laying fascines and gabions, and the construction of batteries, &c. which was done with the greatest zeal and activity till the 20th September. The battering train at that date had also been, by great exertion and good arrangement, brought forward to Lamégo, and the garrison of Rodrigo having become much distressed for supplies, it was intended to try some immediate enterprise against it, when the French made a great effort for its relief. On the 28th September, Marshal Mar-mont crossed the Agueda with an overpowering force, on which the allies, after some sharp affairs, fell back behind the Coa, where they went into more retired cantonments, head-quarters being at Frenada.

2d October.

The enterprise against Rodrigo, though thus baffled, was never for a moment relinquished, and to ensure the power of commencing the siege at the first favourable moment, no sooner were the troops in their new cantonments than large parties of them were employed to restore the fortifications of Almeida, destroyed by the French on the retreat of Marshal Mas-sena out of Portugal, with the view of rendering it a secure place to assemble the battering train and siege stores. (7)

Early in November the volunteer sappers from the 3d division were re-assembled for further instruction ; and on the 12th November, Almeida being again rendered defensible, orders were sent for the battering train and siege stores to move forward from Villa de Ponte. On the 22d the stores and first division of guns entered the fortress under the pretext of being intended for its armament, though really to be in readiness to commence the siege of Rodrigo at the favourable moment. (8) With the same view the several divisions of the army again moved forward their cantonments into the country between the Agueda and Coa, and every possible exertion was made to bring forward the ammunition to Almeida.

At this time, the French, apparently unsuspecting of the meditated operation, gave an opportunity for its accomplishment, by detaching from Marshal Marmont's army three divisions of infantry and a body of cavalry to the assistance of their armies in Valencia, also a division to re-occupy the Asturias, and a force to scour the province of Las Montanas. Success depended on secrecy and dispatch ; but the passage of the Agueda required considerable previous preparations, as the main ford and permanent bridge are within musketry of the walls of

Rodrigo, and all the other passages are either deep or of difficult access; and none of them can be depended on in winter, as the river will often rise five or ten feet from the rain of a single day descending from the mountains. Therefore, previously to the army moving, a bridge on trestles of sufficient scantling to bear the weight of heavy artillery was to be constructed and put down at Marialva, near Salices.

The construction of the bridge was confided to Major Sturgeon of the staff corps; and 148 soldiers, artificers, selected from the army, were assembled at Almeida and placed under his orders for this service. (9) The work was secretly performed in the arsenal at Almeida, and when nearly completed, in the middle of December, the several divisions of the army nearest the Agueda commenced making fascines and gabions at their respective villages by the following General Order.

G. O.

*Adjutant General's Office,
Frenada, 18th December, 1811.*

1. The Commander of the Forces begs that the soldiers of the regiments of the 1st, 3d, 4th, and light divisions, and Brigadier General Pack's brigade, may be employed in making fascines and gabions, and pickets, of the following dimensions:

2. Fascines of one foot thick and six feet in length.

3. Gabions three feet in height by two feet three inches diameter, of the same numbers that there will be of the fascines.

4. Twice as many pickets as there will be fascines three feet six inches long.

5. These articles when made are to be kept at the head-quarters of the several regiments; an officer of engineers will be sent round to inspect them, and will pay those who shall have made them, for the larger fascines two vintens each, for the gabions four vintens each, and for the pickets half a vinten each.

6. Lieutenant Colonel Fletcher will send with the engineer officer to the head-quarters of each division, a proportion of tools for the purpose of making fascines and gabions, which will be distributed to the several regiments, and will be returned when the work shall be finished.

7. The engineer officers will report on the progress of the work every third day.

The numbers proposed to be made were 2,500 fascines, 6 feet long, 1 foot thick; 2,000 gabions, 3 feet high and 2 feet 3 inches in diameter; 30 ditto, 5 feet 6 inches by 4 feet 8 inches ditto, for heads of saps; 1,800 tracing fascines, 4 feet long by 6 inches thickness; 400 splinter-proof timbers from 12 to 14 feet long and about 8 or 10 inches thick; 200 sleepers for platforms, 15 feet long, 6 × 4 inches square; 7,000 fascine pickets 3 and 4 feet in length.*

* The tracing fascines were paid for at one vinten each;

The same day the cutting tools, &c. were issued from Almeida, and on the 19th an officer and forty-three rank and file of each regiment of the divisions named in the order commenced these duties; they readily made 140 fascines and gabions per day, and in the course of a fortnight the whole number had been prepared and collected at Gallegos, Villa de Cervo, &c. and the splinter-proof timbers and platforms, &c. had been cut and collected at Espeja.

18th December.

Orders were dispatched to Lieutenant De Salaberry to march to head-quarters the company of Royal Military Artificers employed on the lines, which, with this view, had previously been embodied at Alhandra from the different districts.

A confidential order was at the same time sent to Lieutenant Piper at Lisbon, to prepare for service and take charge of 24 pontoons, to form a bridge at Abrantes.

the splinter-proof timbers and sleepers at eight vintens each; and by an order dated the 22d December, the officers and non-commissioned officers superintending the parties making fascines and gabions were directed to be paid at the customary rates of military working pay.

1st January, 1812.

Every auxiliary arrangement being complete, Lord Wellington, not to lose the favourable opportunity which presented itself, decided on the 1st January, notwithstanding the mortar ammunition being still at Villa de Ponte, to commence the siege instantly with guns only, and directed the bridge for the heavy ordnance to be put down forthwith, the stores immediately to move forward, the investment to take place on the 6th, and ground to be broken on the 7th, to ensure which objects the following memoranda were issued.

MEMORANDA.

Frenada, January 1st, 1812.

1. The cars sent by General Alava, now employed in collecting at Las Agallas the fascines, gabions, and pickets made by the light and 3d divisions, and all the cars at the cantonments occupied by the light division and Major General Colville's brigade in the 3d division, to rendezvous at Las Agallas on the 5th, to be loaded with gabions and fascines and pickets on the same day, and to move on the following morning to Ciudad Rodrigo.

2. Lieutenant Colonel Fletcher will charge the officer of engineers at Las Agallas with the management of this concern.

3. The ninety cars unemployed and in readiness (see

separate memorandum) and the sixty-six expected to arrive this day are to be sent on the 2d to Almeida; fifty of them are to be loaded with the small stores required by Major Dickson, 106 must be loaded with what is required by Colonel Fletcher, and to move on the 3d to Gallegos.

4. All the carts in the cantonments occupied by the 3d division, except Major General Colville's brigade, by the 4th division, including those sent by General Alava and General Pack's brigade, by Major General Stopford's brigade, and the forty carts expected from Don Julian, are to rendezvous at Gallegos on the 5th, on which day they are to be loaded with fascines and gabions.

5. The sixteen carts at Salices are to be loaded with fascines and gabions at Salices on the 5th.

6. The fifty carts which will have brought the small stores of the artillery to Gallegos (see separate memorandum) on the 3d, are to be unloaded the same day, and to be loaded at Gallegos with fascines and gabions.

7. The carts mentioned in the 3d, 4th, 5th and 6th Articles, are to move to Ciudad Rodrigo, loaded with engineers' stores and materials, on the 6th.

8. The mules (50) in the engineer department to be sent on the 2d to Almeida, to be loaded with engineers' tools, and to proceed on the 3d to Gallegos, on the 4th to return to Almeida for the remainder of the tools, on the 5th to Gallegos, and on the 6th to Ciudad Rodrigo.

9.	53 mules with the 1st division,
	48 ditto ditto 3d ditto,
	57 ditto ditto 4th ditto,

68 mules with the 7th division,

102 ditto ditto light ditto,

to proceed to Almeida on the 3d, and to be loaded with powder and shot in their proper proportions, and to proceed on the 4th to Gallegos.

10. The gun bullocks now grazing at and in the neighbourhood of Celorico to go to Almeida as soon as possible to draw the guns from Almeida to Gallegos on the , and from Gallegos to Ciudad Rodrigo on the .

11. In proportion as the mules belonging to the reserve ammunition of the 5th and 6th divisions and cavalry will arrive at Almeida with powder and shot from Villa de Ponte they are to be loaded with powder and shot in their due proportions, and sent on the 1st day to Gallegos and on the 2d to Ciudad Rodrigo.

12. The carts now employed with Major Sturgeon, and the new carts, are to be sent to Almeida as soon as he will have done with them, to be loaded with powder and shot in their due proportions, and to carry those articles to Gallegos, then lay them down, return the following day to Almeida, and the following day bring fresh loads to Gallegos.

13. The mules mentioned in the 9th and 11th Articles will be employed to carry this powder and shot forward from Gallegos to Ciudad Rodrigo.

14. The carts mentioned in the 1st, 3d, 4th, 5th and 6th Articles, are to return to Gallegos and Las Agallas on the day after they will have quitted those places, to be reloaded with fascines, gabions, &c. and to proceed on the following day to Ciudad Rodrigo.

N.B. It is desirable that the mules mentioned in the

9th Article should lodge the ammunition (small-arm) at the following places on their way to Almeida.

That of the 1st division, Alameda.

3d and 4th ditto, Gallegos.

7th ditto, Sabugal.

Light ditto, Guinaldo.

W.

SEPARATE MEMORANDUM

FOR THE COMMANDING ENGINEER AND COMMANDING OFFICER
OF ARTILLERY.

Frenada, January 1st, 1812.

Ninety cars now at Frenada, and sixty-six expected from Brigadier Alava, to be sent on the 2d to Almeida to be loaded; 106 with engineers' stores and fifty with small stores of the artillery, to carry these articles on the 3d to Gallegos, return on the 4th to Almeida and load with powder and shot; return on the 5th to Gallegos and lay down the powder and shot, and to be reloaded with engineers' stores, to proceed to Ciudad Rodrigo on the 6th.

W.

The same night, however, heavy snow fell, which lay on the ground to a considerable depth, and the weather became very inclement: during the night of the 3d the snow increased considerably in depth, and on the 4th it blew a violent gale with much sleet, in consequence of which it was found that the animals could not perform the journeys ordered in the fore-

going memoranda, and the following was substituted, which deferred the investment till the 7th.

MEMORANDUM.

January 4th, 1812.

1. Eighty carts only of those which left Almeida yesterday, and are now at Gallegos, to be sent back to Almeida, to be there loaded with articles for Colonel Fletcher, and to proceed to Gallegos on the 6th.

2. Forty carts of those now at Gallegos to come to Frenada on the 5th, to be loaded with stores of Colonel Fletcher's at Frenada, and to go to Gallegos on the 6th.

3. The forty-five carts which were sent to Almeida this morning, to be loaded with powder and shot and to go to Gallegos on the 5th, and there remain: the powder and shot being laid down at Gallegos.

4. All the carts which will go to Gallegos, excepting the eighty and forty ordered away by the 1st and 2d Articles of this Memorandum, to be detained there, and loaded with materials and stores of the engineers' department.

The weather on the 5th was little improved, and it was found that the cars could not make a turn from Gallegos and back under four days, and in consequence the investment was deferred till the 8th; but in order to expedite the siege it was arranged to break ground on the evening of the same day.

6th January.

Head-quarters moved to Gallegos, and the next morning Lord Wellington, attended by Colonel Fletcher and some officers of the staff, made a reconnoissance of the place:—they crossed the Agueda by the fords about two miles below the town, and unattended by any escort, reached several points from which they obtained a sufficient view of the defences to decide on the attack, as detailed in the following chapter.

CHAPTER V.

DESCRIPTION OF CIUDAD RODRIGO, WITH THE
PROJECT AND JOURNAL OF THE ATTACK.*Plate III.*

CIUDAD RODRIGO is built on a rising ground on the right bank of the Agueda, and has a double enceinte all round it. The interior wall is of an old construction, of the height of thirty-two feet, and is generally of bad masonry, without flanks, and with weak parapets, and narrow ramparts. The exterior enclosure is a modern *fausse-braie* of a low profile, constructed so far down the slope of the hill as to afford but little cover to the interior wall; and from the same defect of the rapid descent of the hill, the *fausse-braie* itself is very imperfectly covered by its glacis. On the eastern and southern sides there are ravelins to the *fausse-braie*, but in no part is there a covered-way, nor are there any countermines. Without the town, at the distance of 300 yards, are the suburbs; they are enclosed by a bad earthen retrenchment, hastily thrown up by the Spaniards during the investment of the place in 1810, and the French, since they

had been in possession of Rodrigo, had made strong posts of three convents, one on either flank of the suburbs, and one in the centre, and they had also converted into an infantry post the convent of Santa Cruz, situated just beyond the glacis at the north-west angle of the place. The works of the suburbs therefore, though of little strength in themselves, being supported by these convents, were considered fully equal to resist a coup-de-main.

The ground without the place is generally flat, and the soil rocky, except on the north side, where there are two hills called the upper and the lower Teson. The one, *Fig. 2*, at 180 yards from the works, rises nearly to the level of the ramparts, and the other, at 600 yards distance, to the height of 13 feet above them. The soil on these hills is very stony, and during open weather in winter, water rises at the depth of six inches below the surface. The French had erected a small redoubt (R) on the highest hill, which from its situation prevented any attack on the northern side till it should be taken. This redoubt was supported by two guns and a howitzer in battery on the flat roof of the fortified convent of St. Francisco at 400 yards from it, and a large proportion of the artillery of the place (particularly mortars and howitzers placed behind the rampart of the *fausse-braie*) was in battery to fire upon the approach from the hill.

The difficulty of contending with a rocky soil, and the fear of delay in gaining possession of the suburbs, rendered an attack from the north most advisable, notwithstanding the superior fire of that front, and the opposition the redoubt would offer; particularly as it was known from the recent siege by the French that the walls of the place might be breached on that side from the lower Teson over the glacis, whereas on the eastern and southern sides it appeared doubtful, from the fall of the ground, if enough of the walls could be seen to breach them, without the tedious and difficult operation of erecting batteries on the edge of the counterscarp. Moreover, on the northern side a small ravine at the foot of the glacis, and its consequent steepness, would conceal the workmen from the view of the place during the operation of mining to blow in the counterscarp, should it become necessary; which circumstance could not but have great weight in forming the plan of attack, where not a single officer had ever seen the operation performed.

PROJECT OF ATTACK.

The first night, to storm the redoubt on the upper Teson, and establish a lodgement near it, with a communication from the rear.

The second night, to extend the lodgement

to the right to form a parallel, and in front of the parallel to commence batteries for thirty-three pieces of ordnance, to ruin the defences. As soon as these batteries should be finished, to work forward under protection of their fire to the lower Teson, and there erect a battery to breach the main and fausse-braie walls, and during the time of that operation to sap up to the glacis, and blow in the counterscarp.

To avoid the loss attendant upon forcing such retrenchments as the garrison might make behind the main breach, it was determined to attempt to form another opening in the scarp wall just before the conclusion of the attack, by unexpectedly bringing a heavy fire on a small projecting tower seen to its base over the fausse-braie, and represented to be excessively weak and bad, and requiring but little battering to bring it down. A battery for seven guns to be prepared for that purpose, and the guns to be taken from the first batteries, when it should be deemed the proper moment.

The garrison to be driven from the convent St. Francisco, by the fire of the left battery on the upper Teson, which it was concluded would cause the abandonment of the suburbs.

The weather was excessively cold, and there being no campequipage with the army, nor cover of any sort to be found in the vicinity of the place,

it was regulated that the troops should remain cantoned in the nearest villages, and that the duties of the siege should be taken by the light, 1st, 3d, and 4th divisions alternately; each remaining four-and-twenty hours on the ground, to furnish the guards of the trenches, and the working parties. The division coming on duty to march from its cantonments so as to arrive on the ground at mid-day, when the division relieved should return home.

To carry these arrangements into effect the following memoranda were delivered to the general officers commanding divisions.

MEMORANDA.

30th December, 1811.

The Commander of the Forces proposes to attack Ciudad Rodrigo, and in order that the troops may suffer as little as possible from exposure to the weather, he intends that the operations shall be carried on by each of the divisions of the army employed alternately for twenty-four hours.

Brigadier General Pack's brigade, with the exception of the 4th Caçadores, will do duty with the light division.

The 4th Caçadores will do duty with the 1st division.

When a division is ordered for the duty of the siege, each of the battalions belonging to it is to march from its cantonments before day-light in the morning, the troops from the several cantonments of the division

separately by the shortest and most convenient route, which the general officers commanding divisions are requested to ascertain.

The troops will be able to cross at the fords above La Caridad, and all the fords below the ford of Carbonero inclusive.

The troops are to have with them a day's provisions cooked, and they are to be followed by two days' spirits, and no other baggage.

A sufficient number of men to cook the provisions for the day the division is relieved are to be left in the cantonments.

As soon as the first battalion of the relieving division shall move on the ground, the general officer commanding the division which has performed the duty for the preceding twenty-four hours, will commence the relief by sending off to their cantonments a proportionate number of troops, those of course first which have the greatest distance to go to their cantonments, and the relief will proceed in proportion as the troops shall arrive.

The chief engineer will require daily from each division twenty miners, thirty artificers or persons accustomed to work, with a proportion of non-commissioned officers; these men will be fixed upon before the troops march from their cantonments, and are to be placed under his directions (with a list of their names and the regiments to which they belong,) on the arrival of the troops on the ground.*

* This arrangement was contemplated in consequence of the severity of the weather, and the difficulty of supplying provisions to any great number of men beyond the Agueda.

Each regiment to take along with it the entrenching tools belonging to it.

There will be orders daily respecting the working parties, covering parties, guards, &c. The musket and rifle ammunition attached to the light division is to be taken to the ground the first day and remain there.

The 9-pounders attached to the 4th division will likewise be taken to the ground the first day and remain there. The artillery-men are to be relieved daily by those belonging to the brigades and troop attached to the 1st, 4th, and light divisions.

The engineers will order to the ground a sufficiency of cutting tools to enable those men not immediately on duty to supply themselves with fire-wood.

These tools to be handed over from the relieved to the relieving division.

Each division to be attended by the medical staff belonging to it. A place will be fixed upon to which men who may be wounded are to be carried to be dressed, and means will be provided of removing them from thence to their cantonments.

(Signed)

W. DELANCEY,
Deputy Quarter-Master General.

ENGINEERS' MEANS PROVIDED FOR THE ATTACK.

The officers were at this period detached all over the country on various professional duties; but immediately that the operation was defini-

When the operation however actually commenced, the daily tour of a party of men to aid the engineers was changed into a permanent detachment which encamped in their park.

tively fixed for the beginning of January, orders were sent to every one who could possibly be drawn from his employment, to join at headquarters, and they were brigaded as follows:—
Lieutenant-Colonel Fletcher, commanding.

Captain Burgoyne, director.

——— Ross, ditto, (killed).

1st Brigade—Captain Ellicombe,
Lieutenant Marshall (wounded).

2d Brigade—Captain Macleod,
Lieutenant Thomson (wounded).

3d Brigade—Captain Williams,
Lieutenant De Salaberry.

4th Brigade—Captain Mulcaster (wounded),
Lieutenant Skelton (killed).

5th Brigade—Captain M'Culloch (wounded),
Lieutenant Reid (ditto).

6th Brigade—Captain R. Jones,
Lieutenant Elliot.

7th Brigade—Lieutenant Lascelles,
——— Wright.

Captain John T. Jones, Brigade Major.

Lieutenant Stanway, Adjutant.

Twelve officers of the line to act as engineers, and 180 rank and file from the 3d division, under the command of Captain Thompson, 74th regiment, who during the summer had been instructed in the practice of sapping, were attached to the department, also 20 miners and

60 carpenters, selected from the troops generally, and there were present 18 rank and file of the corps of Royal Military Artificers.

These several officers and detachments encamped in the engineers' park, and were for the period of the attack under the exclusive orders of the commanding engineer.

Stores and Tools.

There were deposited in the park during the first days of the siege,

Entrenching tools . . .	2,200
Sand-bags . . .	30,000
Fascines . . .	600
Gabions . . .	1,100

with a due proportion of carpenters' and miners' tools, small stores, plank, and tracing fascines.

During the operation all the animals that could be procured were employed to bring up additional gabions and fascines.

INVESTMENT.

8th January.

At noon the light division having crossed the Agueda at the fords of La Caridad, arrived before the place and formed the investment.

At day-light 269 cars, laden with engineers' stores, moved from Gallegos, crossed the river by the bridge on trestles, which had been fixed

at the ford of Marialva, and arrived soon after the investment. They were parked in a concealed situation at 1,800 yards from the place, immediately on the right of the road from Salices. (10)

JOURNAL OF THE ATTACK.

Night between 8th and 9th January.

STORMING OF REDOUBT RENAUD.

See Plan and Section, Plate VII. Figs. 2 and 3.

During the day every thing was kept as quiet as possible, and an equal examination made of every side of the town, so as to prevent any suspicion of an immediate effort, or of the point about to be attacked; but as soon as it became dark, a brigade formed under arms on the northern side of the upper Teson, and a working party of 700 men paraded in their rear in two divisions of 300 and 400 men respectively, the former being intended to make a lodgement near the redoubt as soon as it should be carried, and the other to open a communication to it from the rear.

At eight P. M. Lieutenant Colonel Colborne, with three companies of the 52d regiment, advanced along the upper Teson to the assault of the redoubt.

The garrison of the work discovered the assailants when about 150 yards distant, and

had time to fire two or three rounds from their artillery (two guns and a howitzer) before the escalade commenced.

Lieutenant Thomson, who accompanied the detachment with a party of sappers, carrying scaling ladders, fascines, axes, &c. on arriving at the counterscarp, finding the palisades to be within three feet of it, and nearly of the same height, immediately placed the fascines from the one to the other and formed a bridge, by which a part of the storming party walked over the palisades, and jumped into the ditch; when finding the scarp without a revetement they readily scrambled to the top of the parapet and came into contact with the bayonets of the defenders. Whilst this was going forward in front, another party went round to the gorge, where there was no ditch, and forced over or through the gate; thus enveloped on every side, the resistance was short, and of fifty men, the garrison of the redoubt, four only escaped into the town, two officers and forty-three men being made prisoners, and three left dead in the work.

The British loss was six men killed, and three officers and sixteen men wounded.

Instantly the redoubt was carried, the precaution was taken of making its rear perfectly accessible by breaking down the gates and forming openings in its rear inclosure wall; but

in a very short time the garrison directed such a quick fire into the work, that it was thought right to withdraw every one from its interior.

The first division of workmen opened a trench on the flank of the redoubt as a lodgement, and the second division opened the communication to it from the rear across the upper Teson, both of which operations were accomplished with little loss, as the garrison continued to direct nearly all their fire into the work throughout the night.

9th January.

The work of last night was every where three feet deep, and nearly four feet wide this morning, and at day-light a relief of fifty men was sent in to improve the lodgement, and 350 men to perfect the approaches. These parties were relieved by similar numbers at noon.

From the lodgement a distinct view was obtained of the defences of the place and of the intervening ground, and the commanding engineer was enabled to decide on the best trace for the parallel and the best sites for the batteries, and at dusk he picketed them out.

The garrison fired a good many shells occasionally throughout the day, but with little effect.

Night between 9th and 10th January.

Working party, 1,200 men.

Covering party, 500 men.

The first parallel (*a b*) being only 600 yards in length, and the communication to it from the rear being already passable, the whole of the parallel and the first batteries were commenced at the same time. The parallel was from 580 to 600 yards from the place, and batteries No. 1, 2 and 3, were each traced for eleven guns, intended to ruin the defences. In No. 1 battery, a return was made for two guns to fire on the convent of St. Francisco.

These batteries being in face of a most powerful artillery were laid out with a thickness of parapet of 18 feet at top, and to provide the great mass of earth required for their parapets, it was proposed to excavate an exterior ditch, as well as to sink their terre-pleins three feet.

The director on duty, Captain Ross, was killed early in the night by a grape-shot fired from the convent of St. Francisco, which unfortunate event caused considerable interruption to the work, but nevertheless every part afforded sufficient cover at day-light to continue the workmen. A row of gabions had been placed between the battery and the place, which served to conceal the workmen in the front ditch, and

a portion of the relief continued to be employed there.

10th January.

Working party, 1,000 men.

The guard of the trenches was this day, and during the whole siege, regulated by the number of workmen employed, so that their united force should form a body of men in the trenches, of at least 1,500, which was supposed to be equal to two-thirds of the garrison; and under all circumstances, the workmen were kept prepared to act with the guard of the trenches.

Part of battery No. 1 was so much shut in by the redoubt in its front, that it was thought less labour to remove five of the guns to the left of No. 3 battery, than to cut away the redoubt; and that battery was accordingly lengthened to contain sixteen guns.

The garrison threw a good many shells amongst the guard and workmen during the day, but without any very great effect.

Night between 10th and 11th January.

Working party, 1,200 men.

Five hundred workmen were employed to open the communication from the parallel to the batteries, to form a trench of communication and support between No. 1, 2 and 3 bat-

teries, and to excavate for the magazines. The remaining 700 were employed on the batteries, parallel and approaches.

The garrison kept up a well supported fire of shells throughout the night, and threw many light balls.

11th January.

One thousand men were employed to raise the batteries, widen the approaches and excavate for the magazines.

At this period the garrison distinguished the batteries from the other parts of the work and attained their range so precisely, that two-thirds of their shells fell into them, and their round shot caused many casualties; particularly amongst those at work in the ditch next the place whenever they unthinkingly exposed themselves. In consequence of this, and some very destructive effects produced from shells exploding in the ditch amongst the workmen, who could not jump out in time to save themselves, the exterior excavation was discontinued altogether, and the interior of the batteries was directed to be sunken to the necessary depth to furnish earth for the parapets. About this time also the garrison adopted the expedient of firing shells filled with powder and having long fuses in salvos. Some of these falling toge-

ther into the parapets blew away in an instant the work of hours.

Night between 11th and 12th January.

Working party, 1,200 men.

The garrison advanced a howitzer into the garden of the convent of St. Francisco, so as to enfilade battery No. 1, it caused many casualties, and interrupted the progress of the work.

12th January.

1,200 men employed on the batteries, parallel and communications, and in filling up shell-holes, the number and depth of which were found very inconvenient during dark.

The carpenters began to lay the platforms and to place the splinter-proof timber of the magazines.

The brigade-major had been ordered to take upon himself the duties of director, vice Ross; but after one tour of twenty-four hours in the trenches, it was found incompatible with the general duties of the siege, and Captain Ellicombe was named director.

Night between 12th and 13th January.

It being found that from the extreme cold, the same men were incapable of working the whole

night through, the reliefs were regulated 1,000 men at dusk, and 500 men at one A. M.

The workmen were chiefly employed to raise the batteries, and every effort was made by the officers to push them forward; but the incessant fire of the place, the extreme cold, and the fatigued state of the men, caused but slow progress to be made.

13th January.

Working party, 1,000 men.

Every exertion was used to complete the batteries, but the front they occupied was so very limited, and the garrison directing their fire against them only, had now attained the range so accurately and threw shells so incessantly and with such long fuses, that half the time and attention of the workmen were directed to self-preservation. To oppose this heavy fire it became necessary to persevere in making the parapets of the batteries of the thickness originally traced, and all the excavation being confined to the interior both night and day, the progress of the work was very unsatisfactory; particularly as the batteries being on the slope of the hill it required considerable height of parapet to screen their rear.

A very large proportion of the 24-pounder shot was still at Villa de Ponte, and Lord

Wellington having received intelligence which led him to calculate that Marshal Marmont would advance for the relief of the place, before the shot could be brought up, and the whole of the proposed operation carried through, desired the opinion of the commanding engineer, as to the practicability of forming a breach from the first batteries. His opinion being in the affirmative, his lordship decided to use them for that purpose, and that the work should in other respects proceed according to the original plan; when, as the movements of Marshal Marmont should render it expedient, he would either storm the place with the counterscarp entire, or wait till it should be blown in.

Night between 13th and 14th January.

Working party, 800 men.

The batteries being now so much advanced as to give every prospect of opening early in the morning, it was decided to push the approaches forward this evening and form part of the second parallel. 500 men were allotted for this duty, and opened the approaches and a sufficient length of the parallel for a guard of support (c c c) by the flying sap with trifling loss, although the garrison by means of light balls discovered the workmen and kept up a continued fire on them. The remaining 300

men were employed to open the embrasures of the several batteries.

The garrison still maintained a strong guard in the convent of Santa Cruz, which being situated immediately on the right of the second parallel, was escaladed, and not being obstinately disputed, was carried without loss before the commencement of the sap; and in the course of the night, a lodgement was made in it.

ARTILLERY ARRANGEMENTS.

The gun bullocks having arrived at Almeida on the afternoon of the 9th, the train marched the following day for Gallegos, and on the 11th reached the ground marked out for the park, near that of the engineers.

The train consisted of

24-pounders, iron, of 9 feet, on travelling	
carriages	34
18-pounders, ditto, of 8 feet, ditto	4

Total 38

with a proportion of spare carriages, forges, gins, &c. complete. Two days' expenditure of ammunition for the thirty-eight pieces was deposited in the park, and a similar proportion was left in an entrepôt at Gallegos.

A proportion of bullock cars was assigned to bring forward ammunition from Almeida to

Gallegos; and the small-arm ammunition mules of the army were appropriated to convey supplies from the entrepôt at Gallegos to the siege, so as to keep always two days' ammunition in the park.

The officers of artillery were
Major General Borthwick, commanding.
Major Dickson, directing the service of the siege.

Captain Holcombe.

——— Thompson.

——— Power.

——— Dundas.

——— Dynely.

Lieutenant Bouchier.

——— Love.

——— Johnstone.

——— Ingleby.

——— Smith.

——— Grimes.

Captain May, brigade-major.

Non-commissioned officers and gunners,

British artillery 171

Ditto, ditto, Portuguese 370

Total 541

being for the thirty-eight pieces of ordnance brought up, at six gunners each, eighty-five men over two reliefs for laboratory and magazine duties and escorts, and to replace casualties.

During the two last days firing it became necessary to call detachments from the artillery of the division on duty to assist in the service of the batteries, as the labour was found too severe for the above numbers.

This night the following guns were placed in the batteries.

Against the convent of St. Francisco.

No. 1.—18-pounders	2
No. 2.—18-pounders	2
24-pounders	7
No. 3.—24-pounders	16

14th January.

Working party, 500 men.

The work executed by the flying sap last night was not deemed to afford sufficient cover against the artillery of the place to admit of a working party being kept in it after day-light, and in consequence no fresh men were sent in at the morning relief.

Between ten and eleven A.M. during the relief of the divisions, the garrison made a sortie with about 500 men. This moment was seized for making the sortie, in consequence of a bad custom which prevailed, that as soon as the division to be relieved saw the relieving division advancing, the guards and workmen were withdrawn from the trenches, by which means the

works were left unguarded for some time during each relief, which the garrison could observe from the steeple of the cathedral, where there was always an officer on the look out.

The sortie succeeded in upsetting most of the gabions placed during the preceding night in advance of the first parallel. Some of the troops even penetrated into the right of the parallel, and others would have pushed into the batteries, and probably spiked the guns, had it not been for the steady conduct of a few workmen, collected into a body by an officer of engineers, who manned the parapets and kept up such a steady fire as to induce the assailants to halt when within a few yards. On the approach of Lieutenant General Graham with the advance of the relieving division, the sortie retired into the town with little loss.

The labour of opening and lining the embrasures being much interrupted by a well directed fire from the place, none of the workmen being skilful, and the officer of engineers superintending the operation (Lieutenant Skelton) being cut in two by a cannon shot, it occupied till late in the afternoon before every thing could be rendered complete for the artillery. At half-past four P.M. twenty-three 24-pounders and two 18-pounders opened to breach the body of the place and the *fausse-braie*, at the most

salient point of the northern side of the fortress and two 18-pounders against the convent of St. Francisco. The object of the latter was to lay open the garden and other walls, which had been converted into exterior defences; but the swell of the ground between the battery and the object preventing the guns striking sufficiently low,* their fire was after a few rounds directed on the body of the convent, and was so continued till dark.

The breaching batteries opened so late that by the time their fire became steady and correct darkness obliged them to cease.

Night between 14th and 15th January.

Working party, 700 men.

The fire from the two guns in No. 1, not having had the effect of driving the garrison out of the convent of St. Francisco, from whence they saw into the rear of the second parallel, an attempt was ordered to be made to force into the building at dusk, by a party of the 40th regiment. As soon as the troops had escalated the outer wall, the French retired into the town

* This is an error very likely to occur in placing artillery in batteries on heights, as frequently a person standing upright will see an object over a swell of ground, which a gun placed on the front of a platform will not; this requires particular attention in field-works where garrison carriages are used.

from the main building and from the suburbs, leaving their artillery behind.

The 40th regiment immediately established themselves in the suburbs and held them during the remainder of the siege.

The approaches to the second parallel destroyed by the garrison during the sortie in the morning were reinstated, and 150 gabions were placed in continuation of the second parallel. Some strong gabions supported by cross-pieces in their interior were laid on their sides along the bottom of the small rivulet, to allow the water to run under the parapet of the sap.

The garrison kept up a most heavy fire of shot and shells throughout the night, particularly on the sap, where Captain Mulcaster received a musket ball through the thigh: they also threw many light balls into the sap, but which the sappers readily extinguished or buried with sand-bags. (11)

15th January.

Working party, 500 men.

Employed in the second parallel and the approaches to it.

Lieutenant De Salaberry joined with the company of royal military artificers from the lines, and Captain Williams joined from Villa Velha.

At day-light the breaching batteries resumed their fire with twenty-three 24-pounders and two 18-pounders, and continued to fire without intermission throughout the day. In the evening both the main scarp and fausse-braie walls were so much shaken and injured as to give hopes of speedily bringing them down, therefore, to be prepared to form a second breach speedily in the tower, battery No. 4, for seven 24-pounders, was marked out in a favourable and more advanced situation.

The garrison kept up a heavy fire particularly of shells throughout the day, which occasioned many casualties.

Night between 15th and 16th January.

700 workmen were employed.

400 on No. 4 battery and its communications, 100 to repair the batteries, and 200 to improve the second parallel and the approaches to it.

The sappers were employed to extend the second parallel.

The artillery ran five additional 24-pounders into No. 1 and 2 batteries, in the course of the night.

16th January.

Working party, 700 men.

One half was employed on the new battery

No. 4, and the other half in perfecting the second parallel and the approaches to it.

The batteries opened soon after day-light with twenty-eight 24-pounders and two 18-pounders against the breach, but about half-past nine such a thick fog came on that they were obliged to cease firing. The engineers however took advantage of the fog to place fifty gabions in prolongation of the second parallel.

The expenditure of ammunition to this cessation of fire was 2,790 rounds of 24-pounder and 340 rounds of 18-pounder shot.

Night between 16th and 17th January.

Working party, 700 men.

The embrazures, platforms, &c. were generally repaired throughout the batteries.

The second parallel was pushed to its proper extent on the left and the lower Teson, at 180 yards from the place crowned by it.

As many infantry as could be posted in the parallel without materially impeding the workmen were employed to keep up an incessant fire of musketry on the breach.

This being the spot from which it was originally proposed to breach the fortress, a battery, No. 5, for six 24-pounders, was commenced, to aid in breaching, should circumstances require it. Riflemen were placed in pits in front of the

workmen along the face of the hill to fire into the embrasures and keep under the artillery of the place, which at this short distance was found to destroy every gabion opposed to it.

Lieutenant Marshall was struck by a musket ball in the head whilst instructing the sappers to break out the sap (*c d*).

17th January.

The morning was partially foggy, and the batteries could not open; but about noon, as soon as it was sufficiently clear to point the guns accurately, the fire recommenced as yesterday, and was continued without intermission till dark, when a considerable portion of both walls had been beaten down. The garrison was equally active, and by an incessant fire of shot and shells occasioned many casualties; a 24-pounder in No. 2 was rendered unserviceable by being struck in the muzzle: several of the wheels of the 24-pounder carriages were demolished, and many of the platforms blown up by shells. General Borthwick, who happened to be standing on a platform at the moment of its destruction, received several severe cuts in the face from the splinters.

The workmen were continued throughout the day in the second parallel, but the sappers could not do any thing on the hill, and but little

in the sap (*c d*), as the artillery from the ramparts knocked over the gabions nearly as fast as they could be placed.

In the early part of the day, the garrison, by means of a well directed fire of grape, obtained an ascendancy over the riflemen in the pits, and killed or wounded several of them; but two or three cool fellows steadily persevering in firing at the gunners, the discharges of grape became less correct, and in the afternoon were only kept up from the distant embrazures.

Night between 17th and 18th January.

The platforms of battery No. 4 were laid, the magazine completed, the embrazures opened, and the guns were in before day-light.

The sappers obtained sufficient cover at No. 5 battery to admit of its progress being continued after day-light: they also commenced the return in the sap (*d e*).

The guard in the second parallel kept up a continued fire of musketry on the breach throughout the night, to prevent its being cleared.

18th January.

The batteries opened at day-light as follows:

Against the great Breach.

No. 1, 2 and 3.—24-pounders	. 23
18-pounders	. 2

*To breach the Tower S, distance calculated about
550 yards.*

No. 4.—24-pounders 7

The fire continued throughout the day without intermission, and in the evening the great breach was considered practicable up its centre. The fire of No. 4 was also very powerful in its effect on the tower, which in the evening was in a very ruinous condition.

The fire of the place was equally severe as yesterday and very correct; hitherto not a single shot had been directed against the defences.

A 24-pounder burst in No. 3 from a high shot getting jammed half way down the bore. By this accident one English and one Portuguese gunner was killed, and two of the former and three of the latter wounded.

The expenditure of ammunition from half-past nine o'clock on the 16th to mid-day on the 18th, was 2,754 rounds of 24-pounder, and 150 rounds of 18-pounder shot.

The workmen continued to improve the second parallel on the lower Teson, and to raise battery No. 5, throughout the day, notwithstanding an uninterrupted fire which the garrison kept on them: the sappers, however, could not advance the sap (*de*), in consequence of the accuracy with which two guns constantly struck the gabions.

Captain M'Culloch had a portion of his hair carried away and his jaw broken by a cannon shot.

The little stream at the foot of the glacis running between rather high banks, a bridge was prepared in the park for the bottom of the sap where it should cross the rivulet, and also a wooden trough three feet in diameter to lay down longitudinally in the bottom of the stream, to give the current a free passage under the parapet of the approach.

Night between 18th and 19th January.

The second parallel was perfected this evening. The parapet of battery No. 5 was raised sufficiently to afford cover, and two platforms being laid down, a 5 $\frac{1}{4}$ -inch howitzer and a 6-pounder from a field brigade were placed in it to maintain a fire on the breach during the night, and prevent the garrison working on an interior retrenchment which they had commenced the preceding evening. These pieces, under Lieutenant Smith, kept up a vigorous fire throughout the night, and were considered to have been particularly useful. Little progress only was made with the sap (*fg*), from the inexperience of the sappers and the occasional fire of artillery upon them: at day-light this

fire augmented so much as absolutely to annihilate all their defensive guards.

19th January.

At day-break the batteries resumed their fire as follows :

Against the main Breach.

24-pounders	22
18-pounder	1

Against the Tower.

24-pounders	7
-----------------------	---

In the afternoon the tower being nearly beaten down, and the main breach being rendered extremely good, Lord Wellington, after a close reconnoissance of both breaches, decided to give the assault in the evening, and sitting on the reverse of one of the advanced approaches wrote the following orders for that operation: in the mean time he directed the fire of the batteries to be turned against the defences, which was done with considerable effect.

ARRANGEMENTS FOR THE ASSAULT.

The attack upon Ciudad Rodrigo must be made this evening at seven o'clock.

The light infantry company of the 83d regiment will join Lieutenant Colonel O'Toole at sunset.

Lieutenant Colonel O'Toole, with the 2d Caçadores,

and the light company of the 83d regiment, will, ten minutes before seven, cross the Agueda by the bridge, and make an attack upon the outwork in front of the castle. The object of this attack is to drive the artillery-men from two guns (B) in that outwork, which bear upon the entrance into the ditch, at the junction of the counterscarp with the main wall of the place: if Lieutenant Colonel O'Toole can get into the outwork, it would be desirable to destroy these guns. Major Sturgeon will shew Lieutenant Colonel O'Toole his point of attack. Six ladders, 12 feet long each, will be sent from the engineer park to the old French guard-room, at the mill on the Agueda, for the use of this detachment.

The 5th regiment will attack the entrance of the ditch at the point above referred to, Major Sturgeon will likewise show them the point of attack; they must issue from the right of the convent of Santa Cruz; they must have 12 axes to cut down the gate by which the ditch is entered, at the junction of the counterscarp with the body of the place. The 5th regiment are likewise to have 12 scaling ladders, 25 feet long, and immediately on entering the ditch, are to scale the fausse-braie wall, and are to proceed along the fausse-braie in order to clear it of the enemy's posts on their left, towards the principal breach.

The 77th regiment are to be in reserve on the right of the convent of Santa Cruz, to support the first party, which will have entered the ditch.

The ditch must besides be entered on the right of the breach by two columns, to be formed on the left of the convent of Santa Cruz, each to consist of five

companies of the 94th regiment. Each column must have three ladders 12 feet long, by which they are to descend into the ditch, and they are to have 10 axes to cut down any palisades which may be placed in the ditch to impede the communication along it.

The detachment of the 94th regiment, when descended into the ditch, is to turn to its left to the main breach.

The 5th regiment will issue from the convent of Santa Cruz 10 minutes before seven.

At the same time a party consisting of 180 sappers, carrying bags containing hay, will move out of the second parallel, covered by a fire of the 83d regiment, formed in the second parallel, upon the works of the place, which bags are to be thrown into the ditch, so as to enable the troops to descend the counterscarp to the attack of the breach: they are to be followed immediately by the storming party of the great breach, which is to consist of the troops of Major General M'Kinnon's brigade. Major General M'Kinnon's brigade is to be formed in the first parallel, and in the communications between the first and second parallel, ready to move up to the breach immediately in rear of the sappers with bags. The storming party of the great breach must be provided with six scaling ladders, 12 feet long each, and with 10 axes.

The ditch must likewise be entered by a column on the left of the great breach, consisting of three companies of the 95th regiment, which are to issue from the right of the convent of St. Francisco. This column will be provided with three ladders, 12 feet long, with which they are to descend into the ditch, at a point which

will be pointed out to them by Lieutenant Wright: on descending into the ditch, they are to turn to their right, and to proceed towards the main breach; they are to have 10 axes, to enable them to cut down the obstacles which may have been erected to impede the communication along the ditch, on the left of the breach.

Another column, consisting of Major General Vandeleur's brigade, will issue out from the left of the convent of St. Francisco, and are to attack the breach to the left of the main breach; this column must have 12 ladders, each 12 feet long, with which they are to descend into the ditch, at a point which will be shown them by Captain Ellicombe: on arriving in the ditch, they are to turn to their left, to storm the breach in the *fausse-braie*, on their left, of the small ravelin, and thence to the breach in the tower of the body of the place; as soon as this body will have reached the top of the breach, in the *fausse-braie* wall, a detachment of five companies are to be sent to the right, to cover the attack of Major General M'Kinnon's brigade, by the principal breach, and as soon as they have reached the top of the tower, they are to turn to their right, and communicate with the rampart of the main breach; as soon as this communication can be established endeavour should be made to open the gate of Salamanca.

The Portuguese brigade in the 3d division will be formed in the communication to the first parallel, and behind the hill of St. Francisco (upper Teson,) and will move up to the entrance of the second parallel, ready to support Major General M'Kinnon's brigade.

Colonel Barnard's brigade will be formed behind the

convent of St. Francisco, ready to support Major General Vandeleur's brigade; all these columns will have detached parties especially appointed to keep up a fire on the defences during the above.

The men with ladders, and axes, and bags, must not have their arms; those who are to storm, must not fire.

Brigadier General Pack, with his brigade, will make a false attack upon the outwork of the gate of St. Jago, and upon the works towards La Caridad.

The different regiments and brigades to receive ladders are to send parties to the engineers' depôt to receive them, three men for each ladder.

W.

EXECUTION OF THE ASSAULT.

Immediately it became dark, General Picton formed the 3d division in the first parallel and approaches, and lined the parapet of the second parallel with the 83d regiment, in readiness to open on the defences. At the same time General Craufurd formed the light division in rear of the convent of St. Francisco, and the other detachments for the assault paraded agreeably to the memorandum.

At the appointed hour, the attack commenced on the side of the place next the bridge, and immediately a heavy discharge of musketry was opened from the trenches, under cover of which 150 sappers, directed by Captain Macleod and Lieutenant Thomson, royal engineers, and

Captain Thomson of the 74th regiment, advanced from the second parallel to the crest of the glacis, each man carrying two bags filled with hay, which they threw down the counterscarp into the ditch, and having reduced its depth from $13\frac{1}{2}$ to 8 feet, fixed the ladders upon the bags. Major General M'Kinnon's brigade followed close in rear of the sappers, and immediately jumped upon the bags into the ditch; the garrison, who had prepared and ranged a vast number of shells and combustibles at the foot of the breach and on its ascent, precipitately fired them, and they spent themselves before the troops reached the sphere of their action.

General M'Kinnon's brigade instantly pushed up the breach, in conjunction with the 5th and 94th regiments, which arrived at the same moment along the ditch from their right. The men mounted in a most gallant manner against an equally gallant resistance, and it was not till after a sharp struggle of some minutes that the bayonets of the assailants prevailed and gained them a footing on the summit of the rampart. The defenders then concentrated behind the retrenchment, which they obstinately maintained, and a second severe struggle commenced.

General Vandeleur's brigade of the light division moved from behind the convent of St. Francisco at the same time with the brigade of

the 3d division from the parallel, and during its advance received a heavy fire of musketry from the ramparts, by which Major General Craufurd was mortally wounded.

Bags of hay were thrown into the ditch, and as the counterscarp did not exceed eleven feet in depth, the men readily jumped upon the bags, and without much difficulty carried the little breach, which having no interior defence was not obstinately disputed.

The division, on gaining the summit, immediately began to form with great and most praiseworthy regularity, in order to advance in a compact body and fall on the rear of the garrison, who were still nobly defending the retrenchment of the great breach. The efforts of the 3d division to force that retrenchment increased with their duration; and after losing many men and officers thrown down the scarp into the main ditch, a depth of thirty feet, a desperate effort was directed along the parapet on both flanks, which succeeded in turning the retrenchment. The garrison then abandoned the rampart having first exploded a quantity of powder in the ditch of the retrenchment, by which General M'Kinnon and many brave men perished in the moment of victory.

It is probable that the success of the column at the lesser breach had become known to the

defenders of the great breach before the final effort which overpowered them, as they suddenly relaxed in their defensive efforts, individually dispersed, and sought refuge in the town, where they were pursued from house to house till all the survivors were made prisoners.

The Portugeze, under Brigadier General Pack, spiritedly escalated the small redan in front of the gate of St. Jago, defended by a small guard, which they overpowered and bayoneted; but no attempt was made to escalate the main rampart on account of its great height, and the double obstacle created by the *fausse-braie*.

LOSS OF THE INFANTRY.

The loss of the besiegers during the operation was 9 officers and 217 men killed, and 84 officers and 1,000 men wounded. Of the above numbers 6 officers and 140 men were killed, and 60 officers and 500 men wounded in storming the breaches; amongst the latter was Lieutenant Thomson the engineer, with the third division.

LOSS OF THE ARTILLERY.

The loss of the artillery during the siege was eight gunners killed, seventeen gunners severely, and Captains Power and Dynely, and forty-nine gunners, slightly wounded.

AMMUNITION EXPENDED.

The expenditure of ammunition was

24-pounder rounds 8,950

18-pounder ditto 565

Barrels of powder of 90 lbs. . . 834

Three 24-pounders remained in the park, to be brought forward if required.

DESCRIPTION OF THE BREACHES.

The small breach measured thirty feet in front, and that portion of the large breach thoroughly accessible about 100 feet. The former was in no way retrenched: *Figs. 1, 8 and 9, Plate VII.* show the manner in which the retrenchment of the great breach was formed, by means of cuts (*w*) through the terre-plein perpendicular to the parapet, with a breast work in rear of them. Consequently on gaining the summit of the breach in order to advance, it became necessary to force over those cuts, or to jump down a wall sixteen feet in depth, at the foot of which had been ranged a variety of impediments, such as iron crows' feet, iron chevaux de frise, iron spikes fixed vertically, and the whole being encircled with the means of maintaining a barrier of burning combustibles.

OBSERVATIONS.

The operations of this siege alone, of the five here recorded, were carried on with certain and uninterrupted success, which must be attributed to the more scientific nature of the attack, and the magnitude of the means employed. On a comparison of the relative strength of the different fortresses, the supplies of every nature for this siege will be found infinitely greater than for either of the other attacks; and further the assistance of the men of the 3d division, who had been instructed during the summer in the practice of sapping, proved invaluable to the engineers, as it enabled them in a less space of time, and under a much heavier fire, to push the approaches 300 yards nearer to the place than at the previous attack of Badajos, and to establish a musketry fire on the breach, which prevented the rubbish being cleared away, or any obstacles to the assault being placed on its summit. Indeed it is not improbable, that had circumstances permitted, and the first batteries been used against the defences only, the counterscarp would have been blown in, the approaches carried to the very foot of the wall, and the place reduced with less than half the actual loss. The artillery provided was excellent in its nature, and ample in quantity, and

the officers and gunners were both zealous and expert, and are entitled to the greatest praise for their exertions. The besieging army was in a full proportion to the strength of the garrison, and the soldiers seemed conscious that the operations were differently conducted from those of the former sieges. Every man felt confident of success, and acted accordingly. Patient and indefatigable at work, impetuous and daring in the assault, they shone throughout this siege in their proper light, and gave strong proofs of possessing superior qualities for such undertakings.

The batteries were certainly an unusual length of time throwing up, which must be attributed principally to the small front of the work, against which the garrison directed an incessant fire of shells. It not unfrequently happened that three or four large shells exploded in the middle of the parapet of a battery in the course of an hour, each having the effect of a small mine, and scattering the earth in every direction. In consequence of this dire destruction, the parapets were of necessity made of a great thickness; and the troops, having to march every morning from their different cantonments six or eight miles distant from the trenches, were fatigued before they began to work; and as whilst they remained on duty they could not

take any rest from the extreme cold, they became worn out, and incapable of any exertion long before the expiration of their tour of twenty-four hours duty, which impeded materially the progress of the work. (12)

The French, aware of the weakness of the point attacked, had concentrated a very heavy fire on the approaches to it. Forty-eight pieces of ordnance were in battery for that purpose, and they fired from them during the siege 8,000 thirteen and ten-inch shells, and 3,000 shells of six and eight inches, and nearly 10,000 shot. The practice they made was remarkably accurate, and not one shot was fired at them in return. The place was amply provided with every thing; there being, besides 109 pieces of ordnance mounted on the ramparts, 44 dismounted battering guns with their carriages, and an immense quantity of shot, shells, and musket-ball cartridges remaining after the siege, with a well filled armoury and an amply supplied arsenal.

Seventy-eight officers and 1,700 soldiers having been made prisoners after the assault, leaves no doubt that the garrison exceeded 2,000 men at the commencement of the attack; besides which an army of 60 or 70,000 men, cantoned within sound of their guns, watched over their preservation. Therefore, taking all

the difficulties and peculiarities of the enterprize into consideration, the reduction of Ciudad Rodrigo, whether viewed in its conception, arrangements, or execution, must be ranked as one of the happiest, boldest, and most creditable achievements recorded in our military annals.

JOURNAL OF THE RESTORATION OF THE
DEFENCES.

20th January.

At day-light the royal military artificers and sappers commenced the destruction of the batteries, and the artillery began to withdraw the guns and send them across the Agueda. About nine A.M. Lord Wellington came into the town, and having examined the state of the defences, ordered that immediately on the arrival of the troops to form the garrison, a party should be employed to clear away the rubbish from the breaches. Lieutenant General Leith marched in with his division about mid-day, and in the afternoon the work commenced.

21st January.

1,200 men were employed to level the trenches and clear the breaches. Reports being brought in that the French army was approaching from Salamanca to attempt to recover the place by a coup-de-main, the engineers' stores

were moved from the park into the town, and every exertion was made to render the works immediately defensible.

22d January.

A thick fog prevailed all day—the working party employed as yesterday. The last of the battering train crossed the Agueda.

23d January.

Working party, 1,200 men.

The trenches being in the course of the morning completely filled in, the batteries demolished, and the spare fascines, gabions and stores brought into the place, a party of workmen was employed to repair, enlarge and improve the redoubt (R) on the great Teson.

24th January.

The front of both breaches was now built up with fascines to the height of the cordon line, and the carpenters commenced laying a row of fraises on that level, preparatory to the parapets being formed. As many men as could work with advantage were employed on the breaches and at every other point, but their exertions were much impeded by a fall of snow.

25th January.

The remains of Major General Craufurd were

deposited this morning in a grave excavated in the ditch at the foot of the lesser breach, which his division had carried. Lord Wellington and a very numerous body of officers attended the ceremony.

An advanced redoubt was picketed out and commenced on the lower Teson.

The sappers of the 3d division, who had so ably assisted the engineers throughout the siege, marched to rejoin their several battalions.

28th January.

The commanding engineer, in a conference with Lord Wellington at Gallegos, on the 26th instant, having arranged the preliminaries for besieging Badajos, sent orders this day to the engineer commissary at Lisbon, to embark a proportion of stores for Setuval (13), at which place the commissary-general was directed to hire boats to convey them to Alcacer do Sal. Orders were at the same time sent to Cadiz for four officers and a company of royal military artificers to embark for the Guadiana and march from thence to Elvas, as an addition to the engineers' means in the contemplated operation.

29th January.

Showery weather. Forty-nine Spanish masons commenced the foundation of a new revete-

ment for the part of the scarp breached. They were allowed the ordinary ration and paid at four rials each (twenty to the dollar). Eleven, who were deemed superior to the others, were paid at six rials, the usual rate of payment in Spain being, superior masons, ten rials—common masons, seven rials.

30th January.

Heavy showers. The level of the bottom of the new revetement of the breaches, being, for the sake of covering the masonry, fixed eight feet lower than the bottom of the original ditch, the excavation constantly filled with water, notwithstanding every endeavour to bail it out, which very much retarded the workmen.

31st January.

Settled heavy rain after eleven o'clock. Lord Wellington met General Castaños and rode with him along all the defences and the ground round the place, when it was decided, in consequence of the great numerical strength which the Spanish General proposed for the garrison, to construct an advanced redoubt on the northern face of the upper Teson, to see into the ravines beyond it, and keep an enemy distant from that side; also to strengthen and make more considerable posts of the convents in the suburbs.

1st February.

Showery day. A work for 220 men, in furtherance of the above idea, was marked out on the upper Teson, about 500 yards north of the redoubt (R), and a caponiere of communication, supported in the centre by a redan, was traced out to connect them.

A working party of the troops of 1,000 men, commenced the above service, but their labour was seriously interrupted by the wet weather.

During the attack the prevalence of sharp frosts and cutting winds was deemed by every one peculiarly unfortunate; but since the change of weather, they were found to have been the besiegers' best friends, as water now rose every where at the depth of a few inches below the surface, even on the summit of the upper Teson. The ground also between the second parallel and the place became quite swampy, whereas during the attack every part of the trenches had remained perfectly dry.

2d February.

Heavy rain. The Agueda overflowed the suburbs on its left bank nearly two feet, and cut off the communication with Portugal over its western branch, and the place was left entirely to its own resources.

In consequence of strong reports being

brought in, of the advance of the French army, and the isolated situation of the garrison, every expedient was adopted against a coup-de-main.

3d, 4th and 5th February.

Rainy inclement days, extremely detrimental to the progress of the work. The river much swelled but passable.

From the 6th to 19th February.

Fine weather prevailed, and every exertion was made to push on the repairs and render the new works defensible, by means of military working parties from the 5th division. On the latter day about 3,000 Spanish troops marched into the town to form the garrison, and relieve the British; from which period the working parties were furnished from the Spanish garrison, but continued to be directed by the English officers.

23d February.

The royal military artificers marched for Elvas to be in readiness for the meditated siege of Badajos, and orders were sent for the company employed on the Almada position to march for the same destination.

4th March.

The works on the upper Teson, the improve-

ment of the redoubt Renaud, the strengthening of the several convents, and the additional securities ordered to the western front of the place, were reported as being complete. At the same time the breach in the *fausse-braie* was reported as being built up, its parapets renewed, the counterscarp in its front increased to eighteen feet in depth, and the new revetement of the breach raised three feet above the level of the ditch.

5th March.

On this report Lord Wellington came over to Ciudad Rodrigo and caused the Spanish Governor General Vivas, and the Spanish chief engineer General Calvet, to attend him round the place, and having pointed out to them the motives for the several changes and additions made to the defences, and having supplied the latter with the necessary funds (12,000 hard dollars) for their completion, directed Lieutenant-Colonel Fletcher to give up the charge of the fortifications to General Calvet.

In the afternoon head-quarters commenced their march for Elvas; the several divisions of the army having been put in movement some days previously on the same place, with a view to undertake the siege of Badajos.

CHAPTER VI.

JOURNAL OF THE SIEGE OF BADAJOS IN MARCH
AND APRIL, 1812.

On the 11th March, head-quarters were established at Elvas, and the troops from Beira were cantoned in the surrounding country, preparatory to the investment of Badajos. The reduction of that fortress had long been secretly preparing by Lord Wellington, and on the capture of Rodrigo he confidentially communicated to the heads of the commissariat, artillery, and engineer departments, his views and means for the undertaking. The principal difficulty was to collect a sufficient battering train, the only heavy ordnance in the country, besides the equipment at Almeida, being sixteen 24-pounders in transports in the Tagus. At first it was intended to move the former along the frontier of Beira into the Alemtejo; but on a representation of the reduced condition of the draft bullocks, from want of due supplies of forage, which rendered it unlikely they would be able at this season of the year to overcome the difficulties

of the road, particularly at the pass of Ville-Velha, that idea was abandoned, and it was decided to send along the frontier the sixteen iron 24-pounder howitzers only, with a certain proportion of the gun carriages, and write to Admiral Berkely, commanding on the Lisbon station, to request twenty 24-pounders from the fleet to be sent to Setuval, with the sixteen already in the transports, and to add to their numbers every thing serviceable at Elvas.

Admiral Berkely, in reply to the request for 24-pounders, stated that no ship under his command carried guns of so heavy a nature, but offered to supply twenty 18-pounders with carriages and ammunition complete. This proposition being made known to the commanding officers of artillery and engineers, they were of opinion the siege might be undertaken with a probability of success with the above proportion of the train, 18-pounders, though they would greatly have preferred all the guns being 24-pounders.*

* The difference of effect produced by the concussion of a 24-pounder or an 18-pounder shot striking a wall, particularly at the distance of four or five hundred yards, is far greater than would be conceived by those who have not watched the practice with the two natures of ordnance at the same time. No engineer should ever be satisfied with 18-pounder guns for breaching, when he can by any possibility procure 24-pounders.

Lord Wellington then drew up the following memorandum.

MEMORANDUM

FOR MAJOR GENERAL BORTHWICK, MAJOR DICKSON, AND
MR. BISSET.

January 26.

1. As soon as the gun bullocks will have brought in the ordnance to Almeida, it is desirable that the sixteen 24-pounders carronades, (howitzers,) should be sent off to the Alemtejo by eight bullocks to each.

They might go by easy stages, and the 150 bullocks required to draw the bridge, might accompany them, in order to assist in their removal.

2. Twenty 24-pounder guns and their carriages, and six spare carriages, with their necessary small stores, should likewise be removed from Almeida to Barca d'Alva. They should there be embarked in boats and sent down to Oporto, and thence by sea to Setuval.

3. A letter has been written to Mr. Boyes, to request him to send to Oporto all the 24-pounder shot and spherical case shot that is at Villa de Ponte, and all the powder (900 barrels) that is at Pezo de Regoa to Oporto; to be there embarked and sent to Setuval by sea without loss of time.

4. As soon as the timber will be brought to Almeida from Ciudad Rodrigo, and the bridge will be brought on the transporting carriages to the same place from the neighbourhood of Gallegos, the bullocks should be turned to grass.

5. 1000 barrels of gunpowder, recently arrived from England at Lisbon, to be ordered immediately to Setuval.

W.

**MEMORANDUM ON THE OPERATIONS AGAINST
BADAJOS,**

**FOR MAJOR GENERAL BORTHWICK, MAJOR DICKSON, COLONEL
FLETCHER, AND THE COMMISSARY GENERAL.**

January 28, 1812.

Major Dickson will proceed to Setuval in order to arrange the removal of the ordnance and stores from Setuval to Elvas, passing by Elvas.

- Feb. 5. He will require to go to Elvas 7 days.
- 7. To go to Evora 2 days.
- 8. To Alcacer do Sal 1 day.
- 10. To Setuval 2 days—in all 12 days.

Mr. Bisset will be so kind as immediately to order an intelligent commissary to Setuval, with directions to make the preparations of boats to convey the heavy ordnance and stores from Setuval to Alcacer do Sal.

The same commissary is likewise to communicate with the magistrates of Evora and Alcacer do Sal and Setuval to procure bullocks and carts to remove the ordnance and stores from Alcacer do Sal to Elvas.

- Supposing these arrangements to be ready by the time of Major Dickson's arrival at Setuval, and that he can immediately commence to remove the ordnance and stores from the transports, it will then take seven days to remove the ordnance and stores from the transports to the
- Feb. 17 { boats, 4 days to arrive at Alcacer do Sal, 4 days
 - 21. { to prepare to move from Alcacer do Sal, 12
 - 25. { days to march to Elvas—in all 38 days.
 - Mar. 8. {

W.

In compliance with these arrangements, Lieutenant Love marched from Almeida for Elvas on the 30th January, with the sixteen iron 24-pounder howitzers, and a proportion of stores; and a few days subsequently Captain Power followed with twenty 24-pounder and five 18-pounder travelling carriages, and a further considerable proportion of stores. The former arrived on the 25th February, and the latter on the 3d March, and were parked on the glacis with the divisions of the train as they successively arrived from Alcacer do Sal, and on the 8th March the whole of the ordnance was collected. (14)

Local preparations for the meditated enterprise had been silently proceeding at Elvas from the commencement of February, and on the arrival of head-quarters were found to be in a very forward state. The cutting tools, which had been sent from Lisbon by land carriage, had been received in the middle of the month; and the Portuguese troops, under the pretext of improving the defences of the place, had prepared between three and four thousand gabions and fascines in the woods around, and had brought about fifteen hundred into the fortress, also a considerable number of splinter-proof timbers and some plank. The bridge apparatus of 22 pontoons, which had marched from Lisbon to Abrantes in January,

had arrived in good condition. Many of the stores from Alcacer do Sal had also been received, and further quantities were daily coming in.

14th March.

All the engineer and artillery means being collected, and every other preparation being complete, the pontoons moved from Elvas in the evening to form a fixed bridge over the Guadiana, and two large Spanish boats to form a flying bridge. The latter were drawn by horses borrowed from the artillery for the occasion.

15th March.

One of the large boats having been overturned on the road, it was late before the bridges were completed, and only General Le Marchant's brigade of cavalry crossed.

INVESTMENT.

16th March.

Marshal Beresford, with the third, fourth, and light divisions, under Generals Picton, Colville, and Colonel Barnard, and one squadron of Portuguese cavalry, altogether composing a force of about twelve thousand men, crossed the Guadiana on the bridges, and invested Badajos on its south side without opposition.

The garrison permitted a vidette to be

pushed forward and remain posted on the height of St. Michael within 200 yards of the Picurina fort, which enabled the commanding engineer to make unnoticed a close reconnoissance of the point he considered the most vulnerable, whilst the attention of the garrison was much occupied by a reconnoissance of the south and north fronts, by officers who were desired to be persevering in obtaining a view of the defences.

RECONNOISSANCE.—*Plate I.*

On reconnoitring the place, it was found that the French had strengthened it very considerably since the attack of last year. In the castle they had formed an interior retrenchment, and had mounted many guns on its ramparts. They had also well secured the rear of fort Christoval, raised its glacis and counterscarp before the flank breached, thrown up a formidable redoubt on the site of the breaching battery, and had brought into a state of great forwardness a covered communication from the tête-de-pont to the fort.

On the south they had finished one ravelin, and brought two others into a state to be useful, and had commenced a cunette in the ditch, which in many parts was full of water and impassable. They had well enclosed the gorge of the Pardaleras outwork, and had connected it with the place by intermediate works; and

had erected very powerful batteries looking into the rear of it. They had also countermined the three right fronts. On the east side they had built up the arch of the bridge over the Rivillas in rear of the lunette St. Roque, so as to impede the flow of the current, and had by that means formed an impassable inundation, spreading along the foot of the glacis to the breadth of 200 yards, and entirely covering fronts 7—8. To attack the castle in its improved state of defence was out of the question; and without miners, without mortars, and having only inexperienced sappers, and a most inadequate number of guns to attack the south fronts which were countermined, and would necessitate three or four lodgements being formed, could not be recommended. Therefore as the only practicable measure, it was proposed to take advantage of a defect in the fortifications, and from a distance breach the main rampart, leaving it to the valour of the troops to surmount the intermediate obstacles, which, in a properly conducted siege, would be removed by art and labour.

DETAILS OF PROJECT OF ATTACK.—*Plate IV.*

This project of attack was formed on the knowledge that the counterguard in front of the right face of the bastion of La Trinidad being left in an unfinished state, the main scarp of

the bastion might be seen sufficiently low down from the hill on which fort Picurina stands, to be breached from thence. In consequence it was proposed to establish a parallel which should embrace fort Picurina with its left, and extend so far to the right as to form a first parallel against the place in which enfilading batteries might be established to keep under the fire of all the faces and flanks bearing on the Picurina hill: also to throw up batteries on the left of the parallel to injure the front defences of fort Picurina, and to plunge into its interior with small charges, fired at high elevations, so as to break down the palisades along its gorge.

These batteries to open at day-light, and on the evening of the same day it was proposed to assault fort Picurina, make a lodgement in it, and connect it with the first parallel. Then to throw up breaching batteries in the most eligible situations on the Picurina hill, to breach the right face of the bastion Trinidad; and as the attack would not admit of the opposite flank of the bastion of Sta. Maria being silenced by enfilade fire, it was proposed to breach it also at the same time with the face. Further, as from the distance of the breaching batteries, several days would be required to render the breaches practicable, during which time the garrison might retrench them, it was proposed,

as soon as the great breaches should become practicable, to turn the fire of all the breaching guns upon the curtain between them, and make a third breach in it, which would from its situation turn the defences of the other two.* The obstacle of the inundation to be avoided, by forming the columns for the assault behind the hills to the south and west of it. The covered-way and ditch to be entered as at Rodrigo. (15)

ENGINEERS' MEANS PROVIDED FOR THE SIEGE.

Officers.

Lieutenant Colonel Fletcher, commanding.

Major Squire, director.

—— Burgoyne, ditto.

1st Brigade—Captain Ellicombe.

Lieutenant Gipps (wounded.)

2d Brigade—Major M'Leod (wounded.)

Lieutenant Elliot (wounded.)

3d Brigade—Captain Nicholas (mortally do.)

Lieutenant Emmett (wounded.)

* About the year 1757, the king of Spain ordered the enceinte of Badajos to be rebuilt upon a much superior profile to the works then existing. The bastions, however, only were finished, and they are still connected by the original curtains, which are very low and of extremely bad masonry; no doubt was therefore entertained that a breach could be effected in the curtain in one day's firing. Probably the French were informed of this particular, and in consequence selected the curtain for the place of their breach.

ment, 120 bullock cars, laden with engineers' stores, marched from Elvas; also 1,000 Portuguese militia men carrying 500 gabions. The latter reached the investing corps in the evening, but the cars did not arrive till four A. M. on the following morning (the 17th) although the distance was not sixteen miles.

17th March.

The park was fixed on a gently rising ground, about 1,800 yards from the place, a little to the south of the Talavera road. The intervening heights of St. Michael concealed it from the view of the garrison.

In the course of the siege there were deposited in the park, 3,000 intrenching tools, 80,000 sand-bags, 1,200 gabions, 700 common fascines, and an equal number of tracing fascines, with a sufficient supply of plank and splinter-proof timber and small stores. A quantity of brushwood was collected in the vicinity and made serviceable during the operation.

ARTILLERY MEANS PROVIDED FOR THE SIEGE.

Officers.

Lieutenant Colonel Framingham, commanding.

————— Robe, joined 30th March.

Major Dickson, directing the service of the siege.

—— May, assistant adjutant general.

Major Holcombe.

Captain Gardiner.

——— Power.

——— Latham (killed.)

——— Dansey.

——— Dundas, (wounded, lost an arm.)

Lieutenant Bouchier.

——— Weston.

——— Connel (killed.)

——— Grimes (wounded.)

——— Love (slightly wounded.)

German Artillery.

Captain de Rettberg.

——— Daniel.

Lieutenant Luchow.

——— Thiele (slightly wounded.)

——— De Goeben (severely wounded.)

Portuguese Artillery.

Major Tulloch (wounded severely.)

Captain Cox.

——— Michell.

Also two captains, and twelve lieutenants,
natives of Portugal.

Gunners.

	Rank and File.
British Artillery	296
Portuguese ditto.	566
	<hr/> 862

Artificers attached to the battering train . 25

Ordnance and Ammunition.

24-pounders iron	16
18-pounders do. (<i>Russian guns</i>).	20
24-pounder howitzers iron*	16
	<hr/>
	52

24-pounder round shot from
the north, from Alcacer do Sal,
and collected at Elvas, (including
6,720, 22-pounder and
23-pounder,) 22,367

18-pounder round shot from
Alcacer do Sal, and collected
at Elvas 17,837
5½-inch common shells 2,526
5½-inch spherical do. 2,440
24-pounder grape 1,680
24-pounder case 424
18-pounder grape 1,000
18-pounder case 500

with an ample supply of powder.

Some additional supplies of 24-pounder and
18-pounder round shot were received from Al-
cacer during the operation.

The inequality of the 18-pounder shot was
so great that it became necessary to divide

* A species of ordnance invented to give the greatest effect
to spherical case shot. They are made only six calibres in
length, without a chamber, and weigh 13 cwt. The charge
one twelfth the weight of the shot.

them into three sizes, and paint them of different colours, to preserve regularity in practice.

The first division of ordnance, consisting of eight 24-pounders, ten 18-pounders, and eight 24-pounder howitzers, marched from Elvas on the morning of the investment to the bridge over the Guadiana.

JOURNAL OF THE ATTACK.—*Plate IV.*

Night between the 17th and 18th March.

Working party 1,800 men.

Covering party 2,000.

The commanding engineer, having thirty armed men as a support, proceeded at dusk to the heights of St. Michael, whilst the covering party paraded in front of the engineers' park, and the workmen received their tools. The trace of the parallel was soon picketed out at 160 yards from the covered-way of the fort; but there being great irregularity in the line of ground over which the approaches were to be traced, and the evening being very wet and windy, full three hours passed before the parties were ready to begin work.

From the proximity of the intended parallel to the Picurina redoubt, the covering party could not be placed in front of the workmen, but was distributed in the hollows, *c c c*.

From this same cause of the parallel being so

very near to the fort, as almost to render the discovery of the workmen certain, the moment they should begin to use their tools, it was decided to line the approaches with workmen, as a preliminary measure, and then to line the parallel.

The communication, *h h*, from the rear to the parallel measured 4,000 feet, and therefore should only have taken 1,000 workmen to open it; but the night being excessively wet and windy it may be supposed that some irregularities prevailed, and when the approaches were lined, only 600 men instead of 1,000 were found disposable for the parallel. They were placed at three feet apart, and opened 600 yards of it from *a* to *b*.


The wet and tempestuous weather during the night, added to the little suspicion entertained by the garrison of any such immediate and bold effort, prevented their discovering the workmen till day-light, although from the trenches a good deal of bustle was occasionally heard in the work.

18th March.

Working party, 1,200 men.

Guard of the trenches, 1,500.

At day-light the approaches and parallel were generally three feet deep, and three feet six inches wide, and the relief was employed



to improve them. As soon as the work of the night was perceived, the garrison of fort Picurina was greatly reinforced, and a continued musketry fire was kept up from the parapets and covered-way. They also fired frequently from a howitzer and three or four field-pieces in the fort; and occasionally a few rounds were fired from some heavy guns on the ramparts of the fortress, but without much effect.

Frequent and heavy showers throughout the day.

Night between 18th and 19th March.

Working party, 1,800 men.

Guard of the trenches, 1,500.

Battery No. 2, for four 24-pounders, against the Picurina fort, and battery No. 1, for three 18-pounders and three 5½-inch iron howitzers, were traced out at dusk; the latter was intended to enfilade the communication from the town to the fort, as well as to assist No. 2 in breaking the palisades and ruining the defences of the Picurina.

400 men were employed on those two batteries and their communications, 400 in the parallel opened last evening, 600 to render the approaches, *h h*, passable, and the remaining 400 to prolong the parallel about 450 yards to *d* on the right, and also to extend it from *a* to *k* beyond battery No. 1 on the left.

19th March.

Working party, 1,400 men.

Guard of the trenches, 1,500.

The workmen were distributed throughout the parallel, approaches and batteries.

During the night the garrison had raised the parapets of fort Picurina, and had formed good cover with sand-bags for their tirailleurs in the covered-way, from behind which they kept up a steady discharge on all exposed to their view. As many men of the guard of the trenches as could be posted in the parallel, without stopping the work, were similarly employed against the fort.

The fire of artillery from the town was greatly increased this morning, particularly on the portion of the parallel opened during the night; but being almost entirely from guns, and spread over a considerable front, it appeared so much less formidable than the concentrated volleys of shells at Ciudad Rodrigo, that the workmen and guard almost disregarded it.

At one P. M. the garrison made a sortie with 1,500 infantry and 40 cavalry. They filed out of the town by the Talavera gate, and the infantry formed into line, unobserved, in the communication from the lunette St. Roque to the Picurina redoubt. As soon as formed they pushed forward in good order at a quick rate, and were in the parallel before the workmen could stand

to their arms, or the guard be regularly formed to receive them. At the same moment with the advance of the infantry, the cavalry came round the right flank of the parallel at a hand gallop, and were in a few minutes in the dépôts at 1,000 yards in rear of the trenches.

The guard and the working party being thus surprized were driven out of the parallel in great disorder; but before they had fallen back fifty yards they were rallied by the officers, and in their turn charged the assailants, dislodged them from the parallel and pursued them far beyond it.

The French cavalry caused great confusion amongst the unarmed men in the engineers' park, several of whom received severe sabre cuts; but on the approach of an armed force the assailants retired without having destroyed any of the stores or materials.

The French sappers who accompanied the infantry filled in a small portion of the parallel during the few minutes the sortie held possession of it, and carried off about 200 intrenching tools.

The loss of the besiegers from this sortie amounted to nearly 150 officers and men killed and wounded; amongst the latter was Lieut.-Colonel Fletcher, the commanding engineer.*

* Colonel Fletcher was struck in the groin by a musket-

To prevent any similar dashing enterprizes of the French cavalry, some squadrons of dragoons joined the besieging force, and one squadron, with a brigade of field-pieces, was kept constantly mounted behind the heights of St. Michael. A signal post was also in the course of the afternoon established on the Sierra del Viento, at a point from which the reverse of the covered communication from the town to fort Picurina could be seen, to give the commanding officer in the trenches instant notice of the assembly of the smallest body of troops.

Half the battering train was this day brought forward and parked in a concealed situation on the north-east of the engineers' park, about 2,500 yards from the place, the other half being left at the bridge on the Guadiana. The ammunition was conveyed in bullock cars from Elvas to the bridge, and brought from the bridge to the park by the small-arm ammunition mules of the army.

At three P. M. a heavy and uninterrupted rain began to pour down.

shot fired within the distance of thirty or forty yards; but happily a silver dollar piece received the blow on its surface, and saved his life. Nevertheless the ball forced the dollar into the groin nearly an inch, and occasioned so severe a wound as to deprive the army of his active personal services till almost the conclusion of the siege.

Night between 19th and 20th March.

Working party, 1,400 men.

Guard of the trenches, 1,400.

The working party in the approaches, *h*, being no longer required, and that in the parallel between *a* and *b* being reduced to 100 men, there remained 500 men to break fresh ground; and the parallel was opened to its full extent on the right from *d* to *n* in a direction clear of the redoubt in front of Christoval, and also as far as the inundation on its left, being altogether more than 600 yards.

The night was extremely wet and unfavourable, and there was little fire kept up on either side.

20th March.

Working party, 800 men.

Guard of the trenches, 1,400.

Colonel Fletcher was unable to leave his bed from the pain of his wound, and there was every appearance of his being disabled for the remainder of the siege; nevertheless Lord Wellington ordered that he should retain the direction of the attack, and to enable him to do so, came to his tent at eight A. M. to decide on the work for the next twenty-four hours, and such continued to be the practice till nearly the conclusion of the operation.

The brigade major attended these meetings with a report and sketch of the work performed during the past twenty-four hours, and a proposition for the next similar period; which, when approved or amended, was communicated to the director on duty, and carried into effect.

The addition to the parallel on the right was excavated last night to three feet deep and three feet six inches wide; but in consequence of a sudden fall of five feet, caused by the difference of level between the Talavera road and the ground on its left, added to the extreme hardness of the road itself, over which the rain flowed in torrents, a space of twenty yards of the parallel was left with insufficient cover. Upon this opening the garrison kept up a constant fire of musketry from the covered-way of the lunette, and of grape-shot from the ramparts, whenever any one showed himself; it was not therefore deemed prudent to file the workmen of the morning relief past the opening.

Before noon this gap was blinded up with the loss of only three men killed or disabled by means of a great number of filled sand-bags thrown into it, and the relief of the afternoon was extended throughout the parallel.

But little progress could be made on the right, as the trenches were full of water; and

from the dead level of the ground there was no possibility of draining them.

Night between 20th and 21st March.

Working party, 1,400 men.

Guard of the trenches 1,400,
and during the remainder of the siege it varied
from 1,200 to 1,400 men.

The parallel was extended on the left across
the Seville road, and the following enfilading
batteries were commenced:—

Battery No. 4, for six 24-pounders and one
5½ inch howitzer, on the prolongation of the
right face of the bastion la Trinidad.

Battery No. 5, for four 18-pounders, on the
prolongation of the right flank of the bastion
St. Pedro.

Battery No. 6, for three 24-pounders, iron
howitzers, on the prolongation of the right face
of the lunette St. Roque.

These batteries were placed in rear of the
parallel on account of the soft state of the
ground, which rendered it doubtful if guns
could cross or be moved along the parallel; and
also under the idea that they would be more
secure from any sortie which the garrison might
make from the lunette St. Roque. Some of
these batteries not being more than 300 yards
from the lunette, and the parallel measuring

above 1,800 yards in extent, whilst the guards of the trenches mustered only 1,400 men, it seemed probable that a sudden rush might succeed for a time sufficient to spike the guns.

As there was no investing corps on the right of the Guadiana, and several French officers had been seen making observations from thence, it was apprehended they thought to enfilade the right of the parallel, and it was therefore thrown back in the direction *e f.* During the night the garrison made a small sortie; it caused the workmen to stand to their arms, and consequently created some little delay, although it was instantly driven in by the guard of the trenches.

Lieutenant Wright was wounded.

21st March.

Working party, 1,400 men.

Employed on the batteries and in perfecting the parallel. Battery No. 2 was brought into a state to be armed.

At seven A. M. the garrison advanced two field-pieces (A) on the right of the Guadiana, to enfilade the parallel; but from the change of direction in the night they did but little mischief; and a few riflemen being immediately posted on the banks of the river, and firing with effect, they quickly withdrew their guns.

Two French officers having been observed making a strict reconnoissance of the hills on the flank of the Pardaleras on the left of the approaches, gave rise to an idea that they were about to establish artillery there to enfilade the left of the parallel, in like manner as they had done the right. Lord Wellington in consequence ordered a picket of forty men to take post in a hollow way near the bridge over the Calamon, and supported them by a detachment of 200 men encamped behind the hill between the Calamon and Rivillas. Two 9-pounders were also brought up to the same spot.

Heavy showers all day.

Night between 21st and 22d March.

Working party, 1,600 men at dusk.

1,400 at midnight.

1,200 at day-light.

The exact enfilade of the right face of the lunette St. Roque falling on a hollow, which would render the fire from battery No. 6 uncertain, a direct battery (No. 3) against the lunette, for four 18-pounders, was picketed out.

The relief at dusk was by some mistake 350 men short of its numbers, which however was of little consequence; for at eleven P. M. came on a heavy rain, which continued throughout the night, and little progress could be made with the batteries on the low ground.

The left battery against the Picurina (No. 1.) being in an elevated situation, had all the mass of its parapet thrown up, and its sand-bag revetements raised nearly to the genouillère.

22d March.

The parallel on the low ground was full of water, and the whole morning was occupied in emptying it, and making an artificial bottom of fascines and sand-bags to enable the troops to move along it; and in ineffectual attempts to establish efficient drainage cuts.

During the last night the garrison threw up cover for three field-pieces on the right bank of the Guadiana, and soon after day-light brought them out and opened a very destructive fire, which continued throughout the day, the shot pitching into the parallel beyond the return at *e*, a range of 1,400 yards. (16) In consequence of this, Lieutenant General Leith, with the 5th division, was ordered to march from Campo-maior, and invest the place on that side.

At four P. M. fell one of the heaviest showers imaginable, which again filled the trenches with water. The pontoon bridge across the Guadiana was carried away by the rise of the river; eleven of the pontoons sunk at their anchors, and the current became so rapid that the flying bridges could with difficulty work. It therefore

became a question if it would be possible to supply the army with provisions, and bring over the guns and ammunition for the attack; and serious apprehensions were entertained that it would be necessary to withdraw from before the place.

Lieutenant Piper was sent to resume his charge of the pontoons and flying bridge on the Guadiana, and Lieutenant Lascelles to secure and re-establish the bridge of communication over the Tagus at Villa Velha; and in consequence the brigades of officers for the attack were reduced to seven.

Night between 22d and 23d March.

Working party, 1,400 men.

In the early part of the night the platforms of No. 1 battery were laid down, and before day-light that battery and No. 2 were armed: three artillerymen were wounded whilst bringing in the guns. On the low ground the working party did little beyond clearing the trenches of water, and rendering them passable, as the men sunk at every step nearly knee deep.

23d March.

Working party, 1,200 men.

The garrison had large parties at work all last night and this morning in front of the cur-

tain, between the bastions St. Pedro and St. Antonio, and in strengthening the castle, evidently mistaking the point of attack.

The morning was fine, and the ground having become tolerably firm, every exertion was made to get the platforms laid down. This being attempted in some of the batteries on the right, the parapets of which barely afforded cover, the garrison concentrated a good deal of fire on the carpenters, and killed or wounded several. Nevertheless the work was persevered in with spirit, and at noon all the batteries were so far advanced as to leave no doubt of their opening on the following day; but at three P. M. torrents of rain began to fall, which continued till seven P. M., and every part of the trenches again became full of water.

Night between 23d and 24th March.

Working party, 1,400 men.

The rain which fell in the afternoon had so completely saturated the ground, that the water stood every where in pools; the earth lost its consistency, and would not retain any form, but fell into the ditch as fast as thrown out; the revetements of the batteries also fell, and no solid foundation could be obtained upon which to lay the remaining platforms.

The guns could not travel along the parallel,

or across the fields into the batteries, and no progress was made with the attack.

24th March.

Working party, 700 men.

The morning was wet, but the afternoon proved fine, and the batteries were all nearly perfected before dark.

The garrison throughout the afternoon maintained a much heavier fire on the trenches than at any period since the commencement of the attack. It was, however, principally from guns, and the men being well covered by the parapets, few casualties occurred.

The 5th division invested Christoval.

Night between 24th and 25th March.

Working party, 1,000 men at dusk.

800 at midnight.

The night was fine, and the garrison, probably fatigued with their exertions during the day, fired but little; and all the batteries were completed and armed as follows, without loss :

No. 1. The guns to enfilade the left face of Picurina, and the communication to it from the town; the howitzers to plunge into the interior and beat down the rear palisades, &c.	5½-inch 24-prs. 16-prs. howitzers.		
	0	3	3
Carried over	0	3	3

	Brought over	24-prs.	18-prs.	5½-inch howitzers.
No. 2, For a direct fire against the } Picurina.	4	0	0	0
No. 3, For a direct fire against the } right face of the lunette St. Roque.	0	4	0	0
No. 4, To enfilade the right face of } La Trinidad bastion.	6	0	1	1
No. 5, To enfilade the right flank of } bastion St. Pedro.	0	4	0	0
No. 6, To enfilade the right face of } the lunette St. Roque.	0	0	3	3
	10	11	7	7

A sufficient supply of ammunition was deposited in the magazines, and every thing prepared for the batteries to open in the morning.

The artillerymen were divided into three reliefs, composed of British and Portuguese in proportion to their relative numbers, under the command of the three senior captains, Holcombe, Gardiner, and De Rettberg.

Majors Tulloch and May were appointed to a general superintendence of the fire.

25th March.

At eleven A. M. the abovementioned batteries opened, and the fire was continued very briskly throughout the day. The garrison also fired briskly throughout the day from the ramparts of the place; but their artillery in fort Picurina and the lunette were speedily silenced.

The howitzer in No. 4 battery was rendered unserviceable by a shot from the place.

Captain Mulcaster was killed in the parallel by a cannon shot, and immediately afterwards Lieutenant Rammadge, assistant engineer; Captain Pereira de Amaral, of the Portuguese artillery, was also killed, and Lieutenant Grimes, of the royal artillery, wounded.

The day's firing, beyond breaking down some of the palisades in the covered-way, had produced very little visible effect on the defences of fort Picurina; nevertheless the trenches being now well supported by a good parallel, and the batteries to enfilade all the faces and flanks of the place, bearing on the Picurina fort, being in full play, it was determined to assault and make a lodgement in that work this evening.

Night between 25th and 26th March.

Working party for twenty-four hours.

1,400 men at dusk.

1,400 at midnight.

700 at day-light.

600 at noon.

DESCRIPTION OF FORT PICURINA.

Plate V. Figs. 1, 2 and 3.

Fort Picurina is a work in the form of a bastion, of nearly 200 feet faces and 70 feet flanks,

the rear being closed by a front of fortification. The profile from the bottom of the ditch to the crest of the parapet measures above thirty feet in height, but only the lower fourteen feet of the scarp is perpendicular: at that height a row of fraises was fixed on the wall, and the remainder of the height of the profile was gained by a slope which men could ascend. The counterscarp measured generally nine feet in depth; and at the rounding before the salient angle of the faces four splinter-proof casemates had recently been finished, which flanked the ditch before the faces. The rear, or gorge, was without a counterscarp, but was well flanked from its trace, and well secured by a treble row of inclined palisades. The two flanks alone were without flank defence.

Within the work three splinter-proof casemates, loop-holed and having their entrances well secured, served as a retrenched guard-house.

There were seven pieces of ordnance mounted on the ramparts, and the garrison, commanded by a colonel on the staff, mustered nearly 300 men.

Major General Kempt, commanding in the trenches, made the following arrangements for the assault:—(*Plate IV.*)

Two detachments of 200 men each to be

formed in the parallel, the one on the extreme left, the other in the opening (*d*). Each detachment to be preceded by six carpenters with cutting tools, six miners with crow-bars, and twelve sappers carrying ladders. Lieutenant Stanway to lead the left column, and Lieutenant Gipps the right column; and both detachments to quit the parallel at the same moment, by signal. The left detachment to move round the right flank of the work, and endeavour to force in at the gorge. The right detachment to move direct upon the communication from the town to the Picurina, and leave there 100 men posted at *w*, to prevent any succours being sent to the fort; whilst the other 100 should march upon the work to assist the left detachment in forcing the gorge, and prevent the garrison escaping. A third, or reserve party of 100 men, to be conducted by Captain Holloway, was formed in No. 2 battery, in readiness to assist the other detachments by a front attack, should they find much difficulty in forcing in at the gorge.

EXECUTION OF THE ASSAULT.

It was ten P. M. before these arrangements were completed, at which hour the signal was made, and the detachments advanced. The left party reached the gorge of the work without being discovered; but on attempting to cut

down or force over the palisades, the defenders opened such a heavy fire of musketry that no one could effect it, although the utmost resolution and perseverance were displayed by both men and officers.

The right detachment strictly obeyed its orders, and the half of it which proceeded to the gorge of the work were received with such a heavy fire, that after two or three fruitless attempts to get over the palisades, they drew round to the left flank of the fort, where the ditch was not flanked, and fixing their ladders against the fraises projecting from the escarpe, the foremost were quickly on the top of the parapet, overlooking the garrison defending the rear. The French troops on the ramparts immediately concentrated to oppose this effort, when a spirited conflict ensued, and those first up the ladders seemed likely to be beaten back.

Whilst the contest at the gorge was still doubtful, Major General Kempt ordered the reserve party to advance from No. 2 battery. It entered the covered-way at the points where the palisades had been beaten down, descended the counterscarp, and applied the ladders to the fraises. The foremost men readily mounted, and waited on the fraises till some twenty or thirty were assembled; when they pushed up the parapet, but were so firmly received by the

defenders that many were shot or bayoneted back,* and they only forced in at the same moment that the right detachment mounted the flank. Some of the garrison continued to resist even after the assailants were in possession of the rampart, and were consequently bayoneted; and many were drowned in the inundation in attempting to escape; but a colonel, two other officers, and 80 men were made prisoners.

This brilliant achievement cost the troops 4 officers and 50 men killed, and 15 officers and 250 men wounded. Captain Powis, who commanded, and Captain Holloway, who conducted the reserve detachment, were each badly shot on the parapet of the left face of the work; and Lieutenant Gipps received a bayonet wound on that of the flank.

Immediately the work was carried three battalions were moved up from the trenches and posted in its vicinity, to prevent the possibility of the garrison recovering it by an offensive effort.

Whilst these battalions were still in movement the alarm bell rang in the town; many rockets were thrown up, and a random fire of

* Several officers and many men, shot dead or severely wounded, were found lying on the fraises after the assault, which incontestably proves, as the upper part of the work was not flanked, that the defenders disputed the parapet.

musketry and cannon was opened from every part of the ramparts, the garrison evidently apprehending a general assault. Shortly afterwards the beating of a drum in the lunette of St. Roque created the alarm of a sortie* in the trenches, and the guard and troops in reserve commenced a heavy firing; this occasioned a still heavier firing from the town, which increased that from the trenches, and it was long past midnight before quiet was restored.

A lodgement was then formed on the terreplein, and a communication into the work secured by means of a ramp carried up the exterior slope at the salient angle; this lodgement was connected with the first parallel by the boyau (*t d*), and supported on its left by a part of the second parallel extending to the inundation.

Major Macleod was severely wounded, directing these works, nevertheless by the exertions of the remaining officers sufficient cover was obtained to secure the men before day-light.

26th March.

A proportion of the guard of the trenches was placed in the trench on either side of the

* It appears from the journal of the defence, that a sortie was actually attempted at this moment, and sustained considerable loss from the fire of the guard in the trenches.

Picurina, but none but sentinels were permitted to enter the work.

The fire from the place into the fort was constant and very heavy, and in the course of the day utterly demolished the lodgement of last night; but before evening the sappers had completed a fresh lodgement along the exterior of the unflanked faces of the work.

Batteries 3, 4, 5 and 6, and the three howitzers in No. 1, continued their fire against the defences with the greatest activity during the whole of this day. The garrison also kept up a very vigorous fire, and a 24-pounder gun was disabled in No. 4 by their shot.

The ricochet fire of the batteries was less effectual than might have been expected, but none of the distances were less than 600 yards. The lines to be enfiladed were short, and it required the greatest attention to keep the artillery-men, particularly the Portuguese, to the proper system of direction for this species of fire. They would not believe they were doing good in firing over the parapet, and they preferred striking the wall whenever they could do so unobserved, and this was done to such a degree that the left face of the bastion La Trinidad was very much injured at the salient angle.

In the evening every portion of the second parallel was in a state to cover the guard.

No. 1 and 2 batteries were dismantled.

Night between 26th and 27th March.

Working parties for twenty-four hours.

1,200 men at dusk.

1,200 at midnight.

600 at day-light.

600 at noon.

The following batteries and communications were traced out and commenced at dusk.

No. 7 battery, for twelve 24-pounders, to breach the right face of the bastion Trinidad.

No. 9 battery, for eight 18-pounders, to breach the left flank of the bastion Sta. Maria, defending the principal breach to be made in La Trinidad.

No. 10 battery, for three 24-pounder iron howitzers, to enfilade the ditch in front of the principal breach, to prevent the garrison working in the ditch and creating obstacles to the approach to the breach.

A boyau from No. 1 to the salient angle of the Picurina, as being a nearer and more convenient communication to the new batteries.

27th March.

The garrison, which, till after the capture of fort Picurina, had been completely in error with respect to the plan of attack, now perceiving that front 6, 7, was the point menaced,

had employed working parties during the last night to raise and put in order the covered-way and unfinished ravelin of that front; and this morning those defences were lined with men well covered behind sand-bags or gabions, who kept up a well directed musketry fire on the working parties throwing up the new batteries.

Strong working parties were also employed throughout the day by the garrison to raise the unfinished counterguard before the bastion of La Trinidad.

The fire from the besiegers' batteries 3, 4, 5 and 6 was maintained with vigour the whole day, and the ricochet practice was much improved. The garrison also fired briskly, and disabled one 18-pounder gun in No. 3, and one 18-pounder in No. 5.

The last division of the heavy ordnance was brought from the bridge to the park.

During the night the precaution had been taken to place a row of well filled gabions in front of the ditches of the several new batteries to enable the workmen to continue the excavation after day-light; but the artillery of the garrison soon knocked many of the gabions down, after which the casualties from musketry became so frequent that it was deemed right to employ workmen in the interior of the batteries only.

Sub-Lieutenant Wallace was amongst the wounded.

The new communications from the first parallel to the advanced batteries were passable this evening.

Night between 27th and 28th March.

Working parties for twenty-four hours.

1,200 men during the night.

1,000 in the day.

As the lunette St. Roque covers the dam (V), which retains the water in the inundation, it was deemed advisable to force the garrison to abandon the lunette and break down the dam; when, as the inundation would immediately subside, the troops would not be cramped in their movements, and the works might be pushed much nearer the place. With this view the second parallel was extended to the right (*su*), but could not be carried across the Talavera road from the hardness of the soil, and the light colour of the road, on which the moon shining bright discovered the workmen to the garrison, who picked them off as at noon-day.

The carpenters began to lay the platforms of No. 9 battery. The terre-plein of No. 7 was not sufficiently sunken for that purpose, but the platforms were sent to the trenches by the evening relief.

28th March.

The gabion screen before the batteries had been so much strengthened during the night, that the workmen this morning were posted both in the ditch and interior of the batteries.

That portion of the second parallel opened last night was converted into a good trench.

Between day-light and noon the carpenters completed the platforms of battery No. 9.

The garrison last night withdrew their artillery from the parapets of the lunette of St. Roque; but kept the salients of the covered-way and the interior of the work well lined with expert marksmen, who fired with much effect.

The besiegers' fire continued as yesterday from batteries 3, 4, 5 and 6, but in the course of the day two of the howitzers having been dismounted in No. 6, and a number of casualties having taken place in it from the plunging fire of the castle, that battery was dismantled, and the howitzers placed under cover of the parapet.

Lieutenant Connell of the royal artillery was killed this day.

No other changes were made this day or during the ensuing night with regard to the artillery in the batteries, except completing and making good by exchange all damaged carriages, &c.

Night between 28th and 29th March.

Working parties for twenty-four hours.

1,200 men during the night.

1,000 in the day.

The howitzers from No. 6 battery being exchanged for guns from the other enfilading batteries, and two guns being disposable from No. 4, admitted of that addition to the breaching batteries; and No. 8 battery, for six 18-pounders, against the flank of Santa Maria, was commenced.

The second parallel was carried across the Talavera road by the sap, and a trench for riflemen (*g g*) was struck out in front of the breaching batteries.

29th March.

The sap of last night was attempted to be turned into a trench, but the fire of artillery knocked over the gabions so constantly that the party was withdrawn.

No. 10 battery, for three 24-pounder howitzers, to enfilade the covered-way and ditch of the front to be breached and assaulted, was completed this morning.

The fire from batteries 3, 4 and 5 was maintained throughout the day as yesterday.

The garrison continuing to raise the Trinidad counterguard, and to add materially to the

strength of front 6, 7, Lord Wellington ordered six additional guns to be brought from Elvas and placed in a battery No. 11, to assist in driving the garrison from the lunette of St. Roque. These guns afterwards to breach the curtain of front 7, 8, which it seemed probable an assaulting column might find means of approaching, should the dam be destroyed and the water of the inundation lowered.

Night between 29th and 30th March.

Working party for twenty-four hours.

1,000 men each relief.

The sap across the Talavera road was converted into a good trench, and the sappers extended the second parallel some yards to its right.

Battery No. 11 was commenced at dark, on the glacis of the communication between the lunette and the Picurina fort, and a good blind of gabions being immediately formed in front of the ditch, the party worked without much loss under a sharp fire of musketry throughout the night.

This night breaching battery No. 9 was armed with eight 18-pounder guns, three of which were those employed in No 1, and five were brought from the park.

No. 10, enfilading battery for the ditch before

the breach in the face, was also armed with three 24-pounder howitzers brought from No. 6.

30th March.

Batteries 3, 4 and 5 continued their fire, and breaching battery No. 9, of eight 18-pounders, opened against the left flank of the bastion of Sta. Maria. The practice was excellent, but the wall proved so hard and solid, that apparently very little impression was made by the shot.

Soon after this breaching battery opened, the magazine for its supply, which was in the ditch of the right face of Picurina, was unfortunately blown up by a shell from the place, by which accident four artillery-men were killed and several wounded, and it also occasioned a good many casualties otherwise. There were upwards of 300 18-pounder cartridges in the magazine when the explosion took place, but no delay was occasioned in the fire of the battery, as cartridges were obtained from No. 3, till a supply arrived from the depôt.

The gunners serving No. 9 were at first much annoyed by the enemy's musketry, but riflemen being posted in the trench (*g g*) they kept it under.

In consequence of the advance of Marshal Soult to the relief of the place, the 5th division was withdrawn from before Christoval, and

marched to the front. Some squadrons of Portugueze cavalry arrived to watch the town on that side.

Night between 30th and 31st March.

Working parties, 1,000 men at dusk.

800 at midnight.

500 throughout the day.

The magazines and platforms of No. 7 and 8 batteries being finished, they were armed as follows :—

No. 7 breaching battery, twelve 24-pounder guns against the right face of the bastion of Trinidad, viz.

24-pounders, from No. 4 . . . 5

24-prs. formerly employed in No. 2 1

24-pounders, from the park . . 6

12

No. 8 breaching battery, of three 24-pounders and three 18-pounders, against the flank of Sta. Maria, viz.

24-pounders, formerly in No. 2 . . 3

18-pounders, from the park . . 3

6

The sappers continued to approach the lunette St. Roque: Captain Williams and Lieutenant Elliot were wounded in directing them.

31st March.

The distribution of the battering train ordnance was now as follows :—

	24-prs.	18-prs.	24-prs. howitzers.
No. 1.	0	0	3
No. 3.	0	3	0
No. 5.	0	3	0
No. 7, to breach Trinidad, . .	12	0	0
No. 8, to flank Sta. Maria, . .	3	3	0
No. 9, do. do.	0	8	0
No. 10.	0	0	3
In the park	0	1	9
Unserviceable	1	2	1
	16	20	16

Six Portuguese 24-pounders were prepared at Elvas for arming battery No. 11, but these guns never moved from that fortress.

Batteries 3, 5 and 9 continued their fire, and 7, 8 and 10 opened for the objects before mentioned.

Lieutenant Colonel Robe, at his particular request, took charge of breaching battery No. 7, against the face of La Trinidad.

The garrison, since the 26th, had succeeded in raising the counterguard before the part intended to be breached about four feet, as shown by the light shade, *a, b, c*, in section 5, plate V. ;

and at the period the batteries opened the counterguard covered ten feet of the lower part of the scarp, the total height of which was thirty-one feet.

The fire against the two breaches was kept up with the greatest vigour during the day and the practice was excellent, but still had little effect on either point, and in the evening the flank of Sta. Maria appeared but little injured notwithstanding the increase of fire upon it. (17)

The fire of the garrison this day was particularly active; Captain Barreiros was mortally, and Lieutenant Thiele slightly wounded.

Night between 31st March and 1st April.

Working parties, 800 men during the night.
500 in the day.

A boyau from No. 10 to 11 was formed this night, to secure a more ready communication between the batteries and parallels. The boyau was traced in the direction to *u*, but the fire from the covered-way of the lunette obliged the sappers to change the direction to their left.

1st April.

It was discovered this morning that the garrison had succeeded in raising the counterguard considerably in consequence of the enfilading

batteries not having been sufficiently active during the night.*

The breaching batteries continued their fire the same as yesterday, and by this evening the revetement of the face of Trinidad was at several points pierced through, and the clay behind it clearly seen.

The flank of Sta. Maria also began to show some injury; it was, however, a very solid mass of masonry and evidently casemated. Captain Dundas lost an arm and was dangerously wounded in the side by a cannon shot.

The garrison, notwithstanding the enfilade fire, kept working parties steadily employed on the rampart behind the breach.

The sappers and working party in the trenches were employed to improve the work of last night.

Night between 1st and 2d April.

Working parties, 800 men during the night.

400 during the day.

* The following order was issued in consequence.

RESERVE ORDERS.

Camp before Badajos, 1st April.

"It having been reported to the commanding officer by the commanding engineer that the batteries, with the exception of that commanded by Lieutenant De Goeben, did not fire at the breach last night, according to orders given, he is determined to report every officer to Lord Wellington who shall neglect this duty."

All the batteries not actually firing were thoroughly repaired, which was the nightly practice throughout the siege.

The sappers were employed to approach the lunette by zig-zags, *m*, *m*, and succeeded in placing and filling 120 gabions.

During the night a fire of grape shot and spherical case was ordered to be kept up from No. 7, 8 and 10, to prevent the garrison raising the counterguard in front of the right face of Trinidad.

2d April.

A most active and well directed fire was maintained from the breaching batteries the whole of this day.

The escarpe of the right face of La Trinidad was nearly beaten down, but the clay behind it being supported by the counterforts remained standing very perpendicularly.

In the flank of St. Maria the piers and arch of the casemates were laid quite open to view, and proved a serious impediment to the formation of the breach.

Lieutenant Arango was mortally, and Lieutenant Love slightly wounded.

Night between 2d and 3d April.

Working parties, 600 men during the night.

200 during the day.

Battery No. 11, intended to assist in expelling the garrison from the lunette of St. Roque, and to form a breach in the curtain behind it, was completed and armed as follows:—

18-pounders, from No. 3	3
18-pounder, from the park . . .	1
18-pounders, from No. 5	2
	<hr/>
	6

Three 24-pounder howitzers were brought from the park to No. 5, which was then armed as follows:—

18-pounder gun	1
24-pounder howitzers	3

A fire of grape shot was kept up on the faces being breached during the night.

A bold attempt was made between 9 and 10, P. M. to blow down the batardeau (S) retaining the water in the ditch of the lunette, which would have had the effect of drawing off the inundation. The powder could not be placed precisely at the foot of the batardeau wall as intended, and in consequence failed to blow it down. (18)

3d April.

Battery No. 11 opened on the curtain between the bastions Trinidad and St. Pedro; but the wall proving very hard, after a few rounds the fire was turned against the right

shoulder of the lunette, it being considered that the supply of ammunition would not warrant a great expenditure to form a breach, the possibility of approaching which, since the failure in blowing down the batardeau, had become very doubtful.

The fire of the breaching batteries continued all this day with unabated activity, and in the evening both breaches wore a very promising appearance. Nearly the whole of the parapet over the great breach had been cut away, so that the terreplein became quite open to view. The garrison nevertheless kept parties at work in rear of both breaches and under the counterscarp wall; they had also many men at work throwing up a large battery, T. on a level with the castle, in a situation to overlook the great breach.

Lieutenant da Silva was killed, and Lieutenant Periera da Rosa, Portuguese artillery, lost an arm.

Night between 3d and 4th April.

Working parties, 600 men during the night.

200 during the day.

A battery (No. 12) was traced out this evening on the extreme right of the parallel, for fourteen iron howitzers, to open with spherical case and grape on the enemy's new battery (T.) at the moment of the assault.

The sap was pushed nearly to the crest of the salient angle of the covered way of the lunette and extended from thence to the right and left.

4th April.

Marshal Soult having advanced to Llerena, an arrangement was made to leave two divisions to guard the trenches and give battle with the remainder of the army.

The fire of artillery upon the head of the sap rendering it very improbable that the sappers would be able to work up and gain possession of the lunette, before the breaches would be practicable, two guns in No. 7 battery were turned on its rear inclosure, (a wall between two and three feet thick) to make an opening in it, with a view of forcing in during the night; but from the obliquity of the object they did not produce the desired effect.

The fire from the breaching batteries continued as before, and by the evening both breaches appeared practicable, though not quite in a state to be assaulted.

An 18-pounder gun in No. 11 rendered unserviceable by a shot from the place.

Night between 4th and 5th April.

Working parties, 400 men during the night.

300 at day-light.

200 at noon.

Battery No. 12, for the howitzers, was finished. This battery being only to fire during the assault, was little more than a screen, and a plank for each wheel formed the only platforms.

5th April.

The chief work of the day was to extend and improve the trench for musketry, *g g*, in advance of the breaching batteries, it being found that the riflemen, who occupied the finished parts of the trench, fired into the embrasures of the place with great effect.

The fire from the breaching batteries was resumed with the usual vigour till nearly noon, when the breaches appearing to be sufficiently easy, three guns of No. 8 were turned upon the curtain through the opening between the Trinidad bastion and the unfinished ravelin, to try the strength of the revetement. The wall was visible to the bottom, and a few rounds produced a very great effect.

The fire of the place was very lively in the early part of the day, and was particularly kept up through all the embrasures in the right flank of the bastion St. Pedro, notwithstanding enfilading battery No. 5 had been ricocheting the line of the parapet for ten days. The little effect of the fire of No. 5 was attributed to the superior height of the rampart, it being between 30

and 40 feet above the battery,* and also to the inconsiderable length of the flank.

This morning the breaches were reported to Lord Wellington to be in such a forward state, that a few hours more firing must render them as practicable as could be desired; and it was taken into consideration, whether to storm them in the evening or delay the assault for twenty-four hours, in order to form a third breach. At noon his Lordship made a close personal reconnoissance of the breaches from the most advanced point of the trenches, and seeing the great extent of wall beaten down, and having assured himself of both openings being of very easy ascent, and the close approach of Marshal Soult's army for the relief of the place rendering the gain of a single day highly important, decided to give the assault in the evening and issued instructions accordingly.

At two P. M. the commanding engineer was desired to obtain the best view he possibly could of the obstacles created by the garrison behind the breaches; and after a most attentive examination from various points, having reported that the principal breach appeared to be prepared for an obstinate and protracted

* Recent experiments however prove that an elevation of forty feet does not affect ricochet practice.

resistance, it was determined to carry the original plan into effect, and turn all the guns of the batteries on the old wall of the curtain between the two breaches, so as in one day's firing to obtain an opening into the place which should turn the retrenchment of the bastions, and which opening being assaulted as soon as made could have no interior defence.

At four P. M. the orders for the assault this evening were countermanded, and directions given for a continued fire of grape shot to be kept up on the breaches throughout the night.

Night between 5th and 6th April.

Working party, 300 men at dusk.

300 at midnight.

Such of the embrasures of the breaching batteries as could be turned to see the curtain were so changed, and the platforms made to correspond.

The batteries throughout the night fired grape at intervals on the breaches, and occasionally enfiladed the ditch and rampart of the front breached, with a view to interrupt the working parties of the garrison; but an incessant clinking of tools heard between the discharges, and the great appearance of work in the morning, proved without much effect.

In consequence of the advance of Marshal Soult with an army to raise the siege, the cover-

ing force under Sir R. Hill (having destroyed the two centre arches of the bridge at Merida) fell back on Talavera this evening.

The 5th division, under Lieutenant General Leith, joined the besieging force, and bivouacked in rear of the Sierra del Viento, to support the operations of the assault.

Fourteen 24-pounder howitzers were run into No. 12 during the night.

6th April.

Working party, 150 men at day-light.

150 at noon.

This morning, eight 24-pounder guns and six 18-pounder guns of the breaching batteries were directed on the curtain through the opening between the Trinidad counterguard and the unfinished ravelin, R.

The escarpe was considered to be 23 feet in height, and the guns saw to its very base.

The masonry, as had been represented, proved extremely bad, and after two hours' firing had been quite pierced through, and by four P. M. a good practicable breach had been formed.

Lord Wellington soon afterwards, having reconnoitred the three breaches, ordered the assault to take place in the evening, and in the meanwhile directed all the guns to be turned against the defences.

12. The advance of the light division must precede that of the 4th division; and both must keep as near the inundation as they possibly can.

13. The advance of both divisions must be formed into firing parties and storming parties. The firing parties must be spread along the crest of the glacis to keep down the fire of the enemy; while the men of the storming party, who carry bags, will enter the covered-way at the place d'armes, under the breached face of the bastion of La Trinidad; those attached to the 4th division on its right, those to the light division on its left, looking from the trenches or the camp.

14. The storming party of the advance of the light division will then descend into the ditch, and turning to its left, storm the breach in the flank of the bastion of Sta. Maria, while the storming party of the 4th division will likewise descend into the ditch, and storm the breach in the face of the bastion of La Trinidad.

The firing parties are to follow immediately in the rear of their respective storming parties.

15. The heads of the two divisions will follow their advanced guards, keeping nearly together, but they will not advance beyond the shelter afforded by the quarries on the left of the road, till they will have seen the heads of the advanced guards ascend the breaches: they will then move forward to the storm in double quick time.

16. If the light division should find the bastion of Sta. Maria entrenched, they will turn the right of the entrenchment, by moving along the parapet of the bastion. The 4th division will do the same by an entrenchment which appears in the left face, looking from the trenches of the bastion of La Trinidad.

17. The light division, as soon as they are in possession of the rampart of Sta. Maria, are to turn to their left, and to proceed along the rampart to their left, keeping always a reserve at the breach.

18. The advance guard of the 4th division are to turn to their left, and to keep up the communication with the light division. The 4th division are to turn to their right, and to communicate with the 3d division, by the bastion of St. Pedro, and the demi-bastion of St. Antonio, taking care to keep a reserve at the bastion of La Trinidad.

19. Each (the 4th and light) division must leave 1,000 men in reserve in the quarries.

20. The 4th division must endeavour to get open the gate of La Trinidad; the light division must do the same by the gate called Puerto del Pillar.

21. The soldiers must leave their knapsacks in camp.

22. In order to aid these operations, the howitzers in No. 12 are to open a fire upon the batteries, constructed by the enemy to fire upon the breach, as soon as the officers will observe that the enemy are aware of the attack, which they must continue till they see that the 3d division are in possession of the castle.

23. The commanding officer in the trenches is to attack the ravelin of St. Roque with 200 of the covering party, moving from the right of the second parallel, and round the right of the ravelin, looking from the trenches, and attacking the barriers and gates of communication between the ravelin and the bridge, while 200 men, likewise of the covering party, will rush from the right of the sap into the salient angle of the covered-way of the ravelin, and keep up a fire on its

faces. These last should not advance from the sap, till the party to attack the gorge of the ravelin will have turned it. That which will move into the covered-way on the right of the ravelin looking from the trenches, ought not to proceed further down than the angle formed by the face and the flank.

24. The remainder of the covering party to be a reserve in the trenches. The working parties in the trenches are to join their regiments at half past seven o'clock.

Twelve carpenters with axes, and ten miners with crow-bars, must be with each (the 4th and light) division. A party of one officer and 20 artillery-men must be with each division.

25. The 5th division must be formed, one brigade on the ground occupied by the 48th regiment; one brigade on the Sierra del Viento; and one brigade in the low grounds extending to the Guadiana, now occupied by the pickets of the light division.

26. The pickets of the brigades on the Sierra del Viento, and that in the low grounds towards the Guadiana, should endeavour to alarm the enemy during the attack by firing at the Pardaleras, and at the men in the covered-way of the works towards the Guadiana.

27. The Commander of the Forces particularly requests the General Officers commanding divisions and brigades, and the Commanding Officers of regiments, and the Officers commanding companies, to impress upon their men the necessity of their keeping together, and formed as a military body after the storm, and during the night. Not only the success of the operation, and the honour of the army, but their own indi-

vidual safety, depend upon their being in a situation to repel any attack by the enemy, and to overcome all resistance which they may be inclined to make, till the garrison have been completely subdued.

W.

It will be seen by the omission of all mention of the third breach, that these orders were written for the assault as intended to have taken place on the evening of the previous day.

On the 6th a memorandum was sent to Major General Colville to allot a portion of the advance of the 4th division to storm the breach in the curtain between the bastions Sta. Maria and La Trinidad. Further, the garrison being hourly improving their defensive expedients, Lieutenant General Leith was directed to employ a brigade of the 5th division to escalate the bastion of St. Vicente, or the curtain and flank between it and the bridge over the Guadiana, and to be prepared to support this brigade with the remainder of his division: at the same time the following notes on the foregoing instructions were issued.

Note upon the 6th Paragraph.

It is recommended that the attack of the 3d division should be kept clear of the bastion of St. Antonio, at least till the castle which is above and commands that bastion will be carried.

Note upon the 8th Paragraph.

This arrangement of the columns is made in order that the light division may extend along the ramparts to the left; and that the 4th division, with the exception of the advanced guard, which is to communicate by its left with the light division, might extend along the ramparts to the right. It may be necessary however for these divisions mutually to support each other, and attention must in this case be paid to the formations.

No. 13, will run thus;—after the words “while the men of the storming party who carry bags will enter the covered-way,” insert, “those of the light division, at the place d’armes on the left, looking from camp, of the unfinished ravelin; those of the 4th division, on the right of that ravelin, at the place d’armes under the breached face of the bastion of La Trinidad.”

No. 14. General Colville will observe that a part of the advance of the 4th division must be allotted to storm the new breach in the curtain.

Note on No. 15.

The place here pointed out may be too distant. The heads of the columns should be brought as near as they can without being exposed to fire.

Note on No. 19.

It will be necessary for the commanding officer of the light division to attend to the ditch on his left as he will make his attack. He should post a detachment in the ditch towards the salient angle of the bastion of

Santa Maria, so as to be covered by the angle from the fire of the next bastion on its left looking from the trenches.

Note upon No. 22.

Some signal must be arranged between the commanding officer of the artillery and the officer who will command the attack on the castle, for ceasing the fire in No. 12.

Note upon No. 23.

It would be better that this attack should move from the right of the sap. The commanding officer in the trenches must begin it as soon as he will observe that the attack of the 3d division on the castle is perceived by the enemy.

No. 26. The commanding officer of the light division will attend to this.

General Power will likewise make a false attack on the tête-de-pont. (19)

EXECUTION OF THE ASSAULT.

The assault commenced at the appointed moment, by the party allotted to escalate the lunette St. Roque, moving into the rear of that work, whilst the guard in the sap opened a musketry fire on its faces.

This front fire so completely occupied the attention of the garrison of the lunette that the escalating party fixed the ladders and mounted the rear inclosure wall almost unopposed, and actually came into contact with those defending

the faces before they were aware of the work being carried.

During this time the third division, under Major General Picton, had reached the banks of the Rivillas, where the garrison discovered their approach, and opened a fire on them from the whole of the eastern works; nevertheless the troops ascended the heights with perfect regularity and attempted to rear the ladders against the walls of the castle.

The opposition to an escalade was most obstinate. The defenders, by means of logs of wood, large stones, loaded shells, &c. which had been ranged along the crest of the parapet, crushed all those employed to rear the foremost ladders; and even after having expended these useful auxiliaries the garrison continued to make a successful resistance by means of a well directed musketry fire on the body of the assailants, and bayoneted down all those brave fellows who first ascended the ladders; but by the persevering and stimulating endeavours of General Picton and the officers of the division, who personally exerted themselves to raise the ladders, and brought up fresh men as fast as the foremost fell, an entry was at length forced up one ladder. That effected, the resistance slackened, the remaining ladders were quickly reared, the men ascended in rapid succession, bayoneted

the defenders and established themselves in the castle. The division was then immediately formed, with the view of marching down in an overpowering body on the breaches; but all the gateways were found walled up or too strongly barricadoed to be forced, and no further effort could at the moment be made.

The light and 4th divisions, commanded by Lieutenant Colonel Barnard and Major General the Honourable C. Colville, marching along the western or left bank of the inundation, were discovered by the garrison when on the glacis, and a heavy fire was poured upon them; nevertheless the troops advanced in good order to the covered-way, which they entered without difficulty at various points where the palisades had been destroyed by the fire of the besiegers' batteries. Bags of hay were then thrown into the ditch by the sappers to lessen its depth, and the ladders placed down the counterscarp. The troops readily descended the ladders or jumped down on the bags, and in a little while the ditch became filled with men. The garrison at this time exploded the fougasses, shells, and other combustibles, which they had ranged in incredible numbers along the foot of the breach and in the ditch. Their effect was truly appalling as well as destructive, and naturally caused much confusion amongst

the assailants. In the midst of this unusual degree of fire, smoke and noise, the 4th division mounted the unfinished ravelin (R) in the most willing and determined manner, conceiving it to be the breach; but when having attained the summit of the ravelin they discovered their error, and became exposed to a musketry fire from the parapets of the whole front, and seeing a difficult descent before they could even reach the foot of the breach they hesitated and began to return the fire of the garrison. At this crisis the light division being led too much to its right, joined the fourth division on the summit of the unfinished ravelin, which added to the confusion already existing.

The officers of both divisions on becoming acquainted with their situation did every thing in their power to restore order and arrive at their points of attack. This after much difficulty having accomplished, they spiritedly led up the breach in the face and in the flank; but there being no formation of the troops to make them move as a machine, only the bravest, prompted by their individual gallantry, or those nearest the spot, followed the officers. During the ascent of the first party of assailants the defenders rolled upon them an astonishing number of loaded shells from the crest of the parapet, and exploded a variety of combustibles

which had been ranged on the face of the breach. Nevertheless several officers and men reached the summit and grappled with the chevaux-de-frise of sword blades in front of the retrenchment; but being in insufficient numbers to force over them by a rush, they were much cut and bayoneted in the attempt to remove them, and were after many highly creditable efforts driven down the breach by the defenders with great loss.

The garrison never appeared intimidated nor to lose their decision and coolness for a moment on any point, for whilst some were repelling the assailants with their bayonets from the summits of the breaches, others continued to roll down with the greatest precision and effect, shells and fire-barrels on the men in the ditch below, and their tirailleurs unceasingly fired with accuracy and steadiness from cuts in the parapets between the points of contention.

Similar gallant efforts to those above described were frequently repeated to carry the breaches, but the combustibles prepared by the garrison seemed inexhaustible. Each time the assailants were opposed by appalling and destructive explosions, and each time were driven down with a great loss of officers and of the bravest soldiers.

After several efforts the remaining men, dis-

couraged by such constant repulses, could not be prevailed upon to make a further effort. Their situation in the ditch of a front with an incessant fire upon them from the parapets* was most trying; still not an individual attempted to withdraw—they remained patiently to be slaughtered, though far too discouraged to make a fresh attempt to extricate themselves by forcing the breaches.

The Earl of Wellington, who with his staff had taken a station on the left of the Calamon, in readiness to give any general directions which might become necessary, on being made acquainted with this state of things about midnight, ordered the two divisions to be withdrawn, and to be formed a little before day-light for a fresh effort.

Immediately after this order was issued an aide-de-camp arrived to report the situation of the 3d division in the castle, and was sent back with instructions to General Picton to blow down the gates, but otherwise to remain quiet till the morning, when he should sally out with 2,000 men on the rear of the defenders of the

* It is almost unnecessary to observe that under the actual circumstances of the assault, the arrangement in Memorandum No. 13, for firing parties to be spread along the crest of the glacis, to keep down that of the place, could not be carried into effect.

breaches at the time of the assault in front; and orders were given to encrease the exertions for securing the lodgement in the lunette of St. Roque, and to prepare the dam and bridge of the inundation to be blown up, if thought proper.

The officer of the 5th division, in command of the party carrying the scaling ladders, lost his road between the engineers' park and the bivouac of his division; and Lieutenant General Leith could not, in consequence, move off his ground till after eleven o'clock. He then proceeded to the west angle of the place, forced the barrier of the covered-way, descended into the ditch, and placed the scaling ladders against the left face of the bastion of St. Vicente. The front was prepared for defence, and the defenders discovered the troops when on the glacis; nevertheless the men forced in by esca- lade. As soon as General Walker's brigade was formed, he advanced, according to his orders, along the ramparts, to fall on the rear of the French troops defending the breaches. A momentary stand was attempted to be made by a party of the garrison between bastions 4 and 5, and the British, struck by an unaccountable panic, suddenly dispersed; when the French, in an instant, becoming the assailants, bayoneted them back to the bastion which they had esca- laded, killing many men, and severely wound- ing General Walker, whilst endeavouring to

rally his party. General Leith, by a judicious arrangement, had ordered a battalion of the 38th regiment to follow the leading brigade into the place by the ladders, and to remain, formed as a reserve, in the bastion of St. Vicente. This small body, little exceeding 200 men, under Colonel Nugent, preserved the best order, and received the pursuers with a volley and a charge which almost annihilated them; when the whole force immediately advancing to the breaches, the French troops (already discouraged by the loss of the castle (20)) dispersed almost without a struggle, although the assault in front had ceased.

On this intelligence being communicated to the light and 4th divisions, they marched in at the breaches, and the French troops were all made prisoners in the town. The governor, General Philippon, with some of the principal officers, retired into fort Christoval, where they surrendered in the morning.

LOSS OF THE BESIEGERS.

The total loss of the allied army at this siege was 72 officers and 963 men killed; 306 officers and 3,483 men wounded, and about 100 missing; of which loss 59 officers and 744 men killed, 258 officers and 2,600 men wounded, occurred on the night of the assault. The loss of the artillery was 6 officers and 40 men killed; 8 officers and 101 men wounded.

The only officers of rank who fell during the assault were Lieutenant Colonel Macleod, commanding the 43d regiment, and Major O'Hara, of the 95th regiment; but amongst the wounded were Generals Picton, Colville, Kempt, Walker and Bowes. Of the engineers, who accompanied the several columns, Captain Nicholas was mortally wounded on the great breach, Lieutenant De Salaberry killed on the breach in the flank, Lieutenant Lascelles fell in the ditch before St. Vicente, and Captain Williams and Lieutenant Emmett were severely wounded on the covered-way. The artillery had to regret the loss of Captain Latham on the great breach, and Lieutenant De Gruber wounded at the castle.

EXPENDITURE OF AMMUNITION.

The ammunition expended at this siege was as underneath:—

Round shot .	{	24-pounders . . .	18,832	
		18-pounders . . .	13,029	
Shells . .	{	5½-inch common . .	507	
		5½-inch spherical . .	1,319	
24-pounders .	{	Grape	893	
		Case	112	
3-pounders shot	{	1,268 made into	}	158
		24-pounders grape .		

Carried over 34,850

	Brought over	34,850
18-pounders .	{ Grape	328
	{ Case	168
Total number of rounds		35,346
Powder, whole barrels of 90 lbs. each		2,523

ORDNANCE DISABLED.

The ordnance disabled by the fire of the place was—

Guns—24-pounder	1
18-pounders	3
24-pounder howitzer	1

Total 5

The 24-pounder guns were much blown at the vent, and all required bouching. The 18-pounder guns, however, were very little blown at the vent, which may be attributed to the great windage of the larger proportion of the shot, the ill effect of which was very observable in want of force and precision.

ENGINEERS' STORES EXPENDED.

The expenditure of engineers' means during the attack was—

Entrenching tools, including those	
carried off by the sortie, . .	1,570
Sand-bags	70,000
Gabions	1,200

Fascines	700*
Money disbursed during the operation	3,500 dollars.

LOSS OF THE GARRISON.

The following memoranda were extracted from the governor's papers, found after the assault:—

*Strength of the Garrison on the day of the
Investment, 17th March.*

Effective.	Officers.	Serjeants and Rank and File.
Line	128 . . .	3,804
Engineers . .	10 . . .	234
Artillery . .	21 . . .	300
Cavalry . .	2 . . .	50
Invalids . .	6 . . .	39
Juramentados	5 . . .	72
	<hr/> 172 . . .	<hr/> 4,499
Sick		243
		<hr/> 4,742

* The 10,000 sand-bags remaining unexpended, also 250 gabions and 200 fascines made in the park, were most urgently required at several points during the progress of the attack; but were withheld and kept in reserve, as the sole means of establishing any close lodgement which might become essential to success.

Strength of the Garrison at Noon, on 5th April.

Effective.	Officers.	Serjeants and Rank and File.
Line . . .	119 . . .	3,284
Engineers . .	9 . . .	208
Artillery . .	16 . . .	266
Cavalry . .	2 . . .	48
Invalids . .	6 . . .	34
Juramentados	5 . . .	81
	<hr/> 157 . . .	<hr/> 3,921

Loss in the Sortie, 19th March.

	Officers.	Soldiers.
Killed . . .	0 . . .	30
Wounded . .	13 . . .	274
	<hr/> 13 . . .	<hr/> 304

Loss in Fort Picurina, 25th March.

	Officers.	Soldiers.
Killed and made prisoners .	8 .	278

OBSERVATIONS.

It is a singular circumstance, perhaps without a parallel in the events of sieges, that an army with a powerful artillery, after twenty days' open trenches, and having formed three good practicable breaches in the body of a place, should at the moment of giving the assault employ two divisions on other points to escalate the defences where entire, and that

each of the escalades should be crowned with complete success, whilst the efforts against the breaches were attended with utter discomfiture. Such an arrangement shows no very great confidence to have been placed in the main operation; and to the correct judgment formed on that head by Lord Wellington, with his firmness and resource, in seconding the assault by such unusual efforts, the army is indebted for its success against Badajos.

It has been stated in a note, that nothing but the absolute impossibility of doing any thing more scientific, from the want of means, could justify the attack adopted. If the defenders stand firm it is nearly impossible to carry a breach without marching to it regularly formed. The descent into the ditch, whether by ladders or by jumping down, must break all order in the troops; and therefore such an attack should never be attempted against a place with a reveted counterscarp. At Badajos circumstances combined to render this confusion more than ordinarily great. The French had excavated a ditch (*Plate V. Fig. 7, a.*) at the foot of the counterscarp wall, which increased its depth to sixteen and seventeen feet; and along a considerable part of this excavation had introduced water from the inundation, which took from the space calculated on for the formation

and movement of the troops in the main ditch, besides causing the loss of many men, who were drowned by jumping into the water.

The Spaniards have ever been remarked for leaving their public works in an unfinished state, and their consistency at Badajos proved fatal to the assaulting columns.

In the improvement of the works of the place before-mentioned, the main ditch of the front, 6—7, was so much widened as to include within it the covered-way, and part of the glacis of the original trace; and it being the intention to build a ravelin to the new front, the old glacis and covered-way, included in the space to be occupied by that work, were not removed, but remain in the present ditch as an ill-shapen rock, the interior of it being the old counterscarp, and the front, (*Fig. 7, d e, Plate V.*) where it has been cut down to admit of building the new counterscarp, being very steep and difficult of ascent. The troops, conceiving this ascent to be the breach, cheered each other up, and mounted to the top with great readiness; but when there they became exposed to the fire of the whole front, and from the height on which they stood the space between them and the foot of the breaches appeared like a deep ditch; and, in reality, in front of the breach in the curtain there were some deep excavations (*b b*), suf-

ficiently spacious to prevent an indiscriminate rush forward.

The water which had been introduced from the inundation along the foot of the counter-scarp, precluded all approach to the breach in the face or curtain, except by passing over this rocky mound, or through the very restricted opening between it and the right flank of the Trinidad counterguard; and from this cause a body of men could advance on either point on only a very small front.

The troops for the assault of the breach in the flank had a much more open field, and their meeting with the 4th division on this unlucky spot was an unfortunate accident, which the obscurity of night, and the officer of engineers, who was to show them their point of attack, having been early disabled, can alone excuse.

Plate V. The extent of front of the three breaches open, was above 500 feet, and the greater part of it as good as can be formed. The main breach alone was retrenched (*Fig. 5.*): the rampart behind it being narrow, and retained by a wall fourteen feet in height, the breach was isolated in a manner exactly similar to the breach at Ciudad Rodrigo, by a ditch and parapet made across the whole breadth of the rampart perpendicular to the parapet, as shown by

Figs. 1, 8, 9. Plate VII. Consequently, after gaining the summit of the breach, the assailants must by a fresh effort force over the ditch and parapet, or jump down a wall fourteen feet in height. The ascent of the breach had been covered after dark on the evening of the assault by barrows, extending over nearly its whole surface, and a row of chevaux-de-frise, formed of extremely well-tempered sword blades, had been placed along its summit.

The flank of the Sta. Maria bastion (*Fig. 6*), which had been so entirely beaten down as to form one great breach, had no interior defence, the rampart being narrow, and not retained by a wall.

Along the top of the breach a row of chevaux-de-frise, similar to that on the great breach, had been placed on a low interior parapet; but which, though excellent to resist individuals, was incapable, from its lightness and small base, to withstand the efforts of a body.

The breach in the curtain (*Fig. 7.*) was particularly low and easy of ascent, and could not possibly have had any interior retrenchment from the short time it was forming; and, in fact, the simplest precaution had not been adopted behind it.

The garrison had endeavoured to cut off the

whole front by a retrenchment, (D. E, *Plate I.* and *IV.*) but which had not been sufficiently perfected to be in a defensive state, as is shown by the sections 6, 7, *Plate V. c c.*

From this statement it is evident that the breaches were such as would have been readily carried could they have been properly assaulted by strong columns closely formed up; but in fact there was no powerful effort of that nature made, and scarcely at any one time did more than fifty men ascend either breach in a compact body. The party which was allotted to storm the breach in the curtain was not in the first instance led to it, in consequence of the engineer officer appointed to conduct it having been disabled on the glacis; but having halted on the unfinished ravelin, it became of necessity intermixed with the main body of the division, and could not again be separated from it. It is therefore probable that the breach in the curtain was never attempted; at least, not a single body nor wounded man was to be seen lying upon it at day-break in the morning, whilst the foot and ascent of the other breaches were choked with them.

It is not difficult to conceive that these deviations and failures might arise from the nature of the undertaking, and all occur without the slightest blame attaching to any individual em-

ployed. Certain it is that all the officers acted with the most distinguished gallantry, and did every thing in the power of men to ensure success; but many of them were killed on the glacis; most of those who stood on the edge of the counterscarp to regulate the descent of their men were disabled, and as soon as a certain number of troops had entered the confined space of the ditch the greatest confusion took place, and the efforts of the remaining officers were unequal to restore order: they could then do no more than set the heroic example of ascending the breaches, accompanied by those who might be induced to follow them. Probably never since the discovery of gunpowder were men more seriously exposed to its action than those assembled in the ditch to assault the breaches. Many thousand shells and hand grenades, numerous bags filled with powder, every kind of burning composition and destructive missile, had been prepared, and placed behind the parapets of the whole front. These, under an incessant roll of musketry, were hurled into the ditch, without intermission, for upwards of two hours, giving its whole surface an appearance of vomiting fire, and producing occasional flashes of light more vivid than the day, followed by momentary utter darkness. Description, however, conveys but a faint idea of the

imposing nature of such mode of defence: the doors of success were certainly thrown open; but they were so vigilantly guarded, the approach to them was so strewn with difficulties, and the scene was altogether so appalling, that far from thinking ill of the troops for not forcing through them, it is rather a subject for pride and exultation, that they had firmness to persevere in the attempt till recalled.

The height and general inaccessibility of the castle being deemed to render it secure from assault, only a small body of men had been placed in it; but as the length of wall to which ladders could be applied did not exceed 120 feet, and its thin parapet was very favourable for resistance to an escalade, and the garrison (chiefly Hessians) showed the utmost determination, the opposition to General Picton's effort was as great as could well be made from a wall of that extent, from eighteen to twenty-four feet in height, tolerably flanked. (21)

In ordinary military reasoning such a spot would be considered secure from assault; but the efforts of British troops occasionally set all calculation at defiance; and when a few years shall have swept away the eye-witnesses of their achievements on this night, they will not be credited, particularly the escalade directed by General Leith, which is here minutely de-

tailed, not as being an undertaking generally to be followed, but as marking what it is possible for brave men to effect.

The bastion of St. Vicente, which Major General Walker's brigade escaladed, (*Fig. 4, Plate V.*) had an escarpe 31 feet 6 inches in height, flanked by four guns at the ordinary distance, the palisades of the covered-way were entire, the counterscarp wall 11 feet 9 inches deep, and in the ditch a cunette had been excavated 5 feet 6 inches deep; and 6 feet 6 inches broad.

The approach of the troops was heard whilst they were still on the glacis, and a destructive fire was maintained on them whilst forcing the barrier gate, so that the defenders were not taken unprepared; but being few in number and the thick parapets of the bastion unfavourable to the use of their bayonets, the assailants, covered by the obscurity of night, succeeded in escalading the face of the bastion, without making any effort against the flank. It had been arranged that this escalade should be made on the face and flank of the front towards the river, and the expectation of success was chiefly founded on the flank being very much lower than the face; but the sharp fire of two field-pieces in the flank prevented the men approaching it with the ladders, and they were applied

to the part of the scarp nearest the spot where the troops descended into the ditch, and which happened to be the highest.

There were only twelve ladders supplied from the engineers' park for this escalade, and two or three of that number were never reared; the loss of the assailants, above 600 in killed and wounded, shows that the garrison behaved well, and it is believed that no one gave way till overpowered.*

Indeed it would be gross injustice towards

* The author considers it a duty to endeavour to rectify an erroneous impression which the above statement conveys, of a well flanked scarp, 31 feet 6 inches in height, having been carried by an open and unaided escalade, by mentioning a fact which he has ascertained since he published the first edition.

In the reform of the defences of Badajoz in 1757, when the bastion of St. Vicente was enlarged, the new scarp wall of the left face was built up perpendicularly only to the height of about twenty feet (*b c*), from which level for want of funds to complete the wall, it was made to incline at an angle, so as to join the original scarp or parapet wall at (*a*), as shown in the section. *Fig. 4, Plate V.*

The Spaniards, intending to put a guerite or watch tower at the salient angle of the bastion, had left some feet of this sloped wall on either side of the angle in a rough state. It was at this unfinished spot that the troops first entered and gained a footing on the rampart, when spreading right and left, the defenders taken in rear dispersed, and the assailants on the other ladders scrambled in. This fact takes away every thing marvellous from the assault; but still leaves it sufficiently brilliant to excite the highest admiration.

General Philippon and the French garrison, not to state that throughout the defence the most skilful arrangements were made on every point, and supported with the utmost gallantry by the troops, whose conduct during the assault (although overcome,) excited the admiration and commanded the respect of the victors.

The judgment which will probably be formed on this siege is, that the plan of attack was altogether too hazardous, and more particularly against such brave and skilful opponents as the French; but that as an engineer and artillery operation it succeeded to the utmost letter; that the troops, though they did not carry the breaches, fully supported their reputation in the attempt, and in the escalades even surpassed themselves.

RESTORATION OF THE DEFENCES.

7th April.

At day-light the first object of attention was to remove the numerous wounded into buildings set apart as hospitals, which occupied large working parties of the troops, and, added to the fatigued state of the men from their previous exertions, prevented any effort being made to fill in the trenches.

In the early part of the morning, considerable numbers of the soldiers dispersed themselves

over the town in search of liquor, and after a time became so drunk that subordination ceased and sad scenes of plunder and licentiousness every where prevailed in the houses and streets in spite of the police.

8th April.

Brigadier General Power's Portuguese brigade marched into the place to form the garrison.

Many very disgraceful scenes of irregularity still continuing to prevail, Lord Wellington ordered the troops to remain on parade under arms throughout the day. He also ordered patrols to be in constant movement through the streets, and the provosts to take post in the squares, with full discretionary power to punish on the spot every man caught in the act of marauding, according to the degree of his offence.

Intelligence was received that Marshal Soult, on hearing of the fall of the place by some cavalry which escaped over the bridge after the assault, had immediately countermarched on Seville, and in consequence Lord Wellington, wishing to give the troops a day's repose, deferred commencing to fill in the trenches.

9th April.

At noon a party of 500 men paraded for work

and commenced filling in the trenches. Each relief was directed to perform a certain portion of work, and the men were not allowed to return to their bivouacs till it was completed.

Lord Wellington minutely examined every part of the defences, and afterwards having ascertained that perfect order reigned throughout the town, permitted the troops to be dismissed from their parade.

10th April.

A working party of 500 men at day-light, relieved by similar numbers at noon, continued to be employed as yesterday filling in the trenches.

Intelligence having been received that the cavalry of Marshal Marmont were approaching Castello Branco, an officer was detached to Villa Velha with orders to move the bridge down the stream, and haul it ashore on the left bank of the river, at a point where it could not be destroyed by a fire of artillery.

The volunteer sappers from the 3d division marched to rejoin their battalions.

11th April.

Head-quarters being transferred into Badajoz, the officers and men broke up their camp, and with all the tools, stores and materials

remaining in the park moved into the town. The artillery sent all their guns and stores to Elvas.

12th April.

In consequence of the mode adopted of tasking the men, the quantity of work performed was so considerable that every part of the trenches was filled in last evening, and the clearing and repair of the breaches commenced this morning.

The officers of engineers and the company of royal military artificers, brought from Cadiz for the duties of the siege, marched to re-embark for that garrison.

13th April.

The main body of the army was put in movement on Beira to drive back Marshal Marmont; and the preservation of Badajos till the breaches could be repaired, and the place provisioned, was entrusted to Sir R. Hill with his corps. Under these circumstances Lord Wellington desired the commanding engineer to remain in the fortress, and press forward the restoration of the defences. Sir R. Fletcher in consequence retained the royal military artificers and six officers for that duty: the few remaining officers effective were ordered to join the divisions to which they were attached previously to these

sieges, or were dispersed on various duties throughout the country.

16th May.

Four officers and eighty rank and file of the royal military artificers marched from Badajos for Lisbon, to embark and proceed to the Mediterranean, with a battering train for the service of a corps to be employed from Sicily in besieging Tarragona; but Colonel Fletcher himself remained in the place till the breaches were completely repaired, the castle walls heightened, the Picurina fort strengthened and flanked, and every part of the fortress put into the best possible order. The outlay for this service was 65,000 dollars. (22)

CHAPTER VII.

ESCALADE AND CAPTURE OF THE FRENCH WORKS
AT ALMARAZ BY LIEUTENANT GENERAL SIR
ROWLAND HILL, IN MAY, 1812.

ON the approach of the allied forces from the Alemtejo, Marshal Marmont hastily retired out of Portugal, and head-quarters were fixed on the 25th April at Fuente Guinaldo.

The Earl of Wellington, having now by the recapture of Ciudad Rodrigo and Badajos secured the best entries into Portugal on the north and south of the Tagus, and having converted those barriers into points of support for offensive operations, decided to manœuvre against Marshal Marmont's army on the right of that river. With these intentions, in order to prevent the French forces on the two banks readily combining their movements to oppose him, he wrote on the 24th April to Sir Rowland Hill, then at Almandralejo, to move with part of his corps to the Tagus, to reduce the French posts, and destroy their bridge of communication across that river at Almaraz.

30th April.

Sir Rowland Hill in consequence sent orders

drawn by four pair of mules each, conveying twelve ladders, thirty feet in length, with a proportion of cordage and spare articles for repairs.

In order to conceal the object of the expedition, the officers were instructed to give out that the pontoons were intended to form a bridge across the Guadiana at Lobon, or some other spot in the vicinity, to enable the guns to join Sir R. Hill at Almendralejo.

8th May.

The equipment marched to Montijo, where it obtained an addition of ten Spanish mule carts, it being found that the carts with the ammunition were overloaded.

To augment the belief that the armament was intended to cross to the left of the Guadiana, great anxiety was expressed respecting the repair of the bridge of Merida, and many enquiries were made respecting the best roads leading to the castle of Belalcazar. The approach of other troops by this route was also mentioned.

9th May.

The equipment marched to Merida, where it halted till the repair of the bridge should be complete, which operation had been much retarded from want of tools and materials, the

latter of which were principally obtained from some ruined buildings near the spot.

12th May.

The bridge was completed this afternoon, and the infantry and cavalry for the operation, which had marched from Almendralejo in the morning, immediately passed over and halted at Merida and its neighbourhood.

The force thus assembled under Sir R. Hill, was as follows:—

Lieutenant General Chowne.	Major General Howard's Brigade.	{ 50th, 71st and 92d regiments, with one company 60th rifles.
	Part of Colonel Wilson's Brigade.	{ 28th and 34th regi- ments with one com- pany 60th rifles.
	Colonel Ashworth's Brigade.	{ 6th and 18th Portu- guese infantry and 6th Caçadores.
	Cavalry, under Major General Long.	{ 13th light dragoons.
	Artillery, under Lieutenant Colonel Dickson.	{ Battery of six 24-pounder howitzers and three 9-pounders of Captain Maxwell's brigade.
	Engineers.	{ Major Squire and Lieutenant Wright.

13th May.

The corps advanced to the river Burdalo on the route to Truxillo.

14th May.

It proceeded to Villa Mesia.

15th May.

To Truxillo.

Immediately on the arrival of the troops at Truxillo, a statement of their force and equipment was sent off by the partisans of the French to General Foy, at Talavera de la Reina, particularly mentioning that they were accompanied by a pontoon train. This communication materially tended to the uninterrupted completion of the enterprize; for General Foy concluded that Sir R. Hill was marching with a bridge apparatus to pass the Tagus at some unexpected point, in correspondence with a forward movement of Lord Wellington on the the right bank, and in consequence entertained no apprehension for the safety of Almaraz.

DESCRIPTION OF THE WORKS.

Plate VII. Figs. 4 and 5.

The works at that place had been constructed with great expense and labour by the French, under the view of securing their communication across the Tagus on both banks. On the right

of the river, they consisted of a redoubt for 400 men, on a very respectable profile, called fort Ragusa, with a masonry tower in the interior twenty-five feet high, having two rows of loop-holes for musketry.

This work being situated so far from the bank of the river as to admit of the possibility of an attempt being made in the night to destroy the bridge in its rear, a *flèche* had been constructed on the river bank, which also served to flank fort Ragusa.

On the left bank, a well flanked *tête-de-pont*, reveted with masonry on a good profile, secured the bridge, and as the ground rose immediately from the river to some heights which commanded the *tête-de-pont* at a short distance, a redoubt for 450 men had been constructed on their summit. This work, called fort Napoleon, had a retrenchment across its rear, supported by a loop-holed tower in its centre twenty-five feet in height.

The scarp of the exterior work was injudiciously divided into two steps, by means of a very wide berm, and was certainly not a difficult obstacle to overcome; but the ditch of the retrenchment was well palisaded, the entry of the tower well secured by a drawbridge, and the retrenchment altogether formed a post ca-

pable of an excellent defence after the loss of the outer enceinte.

The road leading to Almaraz from the south, when at the distance of four or five miles from the bridge, passes over an extensive range of high mountains, which form an impassable obstacle to artillery or wheel-carriages except along the road.

On the summit of this range of heights at a short distance from the road stands the old tower of Miravete. That tower the French had surrounded by a lower wall and rampart twelve feet in height, and had mounted seven or eight pieces of ordnance upon it. They had also fortified a large house (used as a venta) standing on the road and had constructed two small works between the house and the tower, forming a strong line of defence across the pass of Miravete.

The next best road over this range of mountains is through the pass of La Cueva, three or four miles to the eastward of Miravete. On the southern side of the ridge cars can ascend by this road; but the descent toward Almaraz is little better than a goat's path to the village of Romangorda.

These roads were pretty well known to Sir Rowland Hill, but all the information he could

obtain of the nature of the defences at Miravete and of the works at Almaraz being from civilians was far too vague and imperfect to serve as a foundation on which to plan a military enterprize, and he moved forward determined to act as circumstances should render necessary.

16th May.

The corps marched from Truxillo at two o'clock A. M. leaving its baggage at that place, but provided with three days' bread, and bullocks for four days' meat. It halted at the Ponte de Alcoxeia, near Jaraceijo, till the evening, and at half-past seven moved on in three columns to surprize and carry by a rapid attack the French posts round Almaraz.

ARRANGEMENTS FOR THE ATTACK.

Infantry.

The left column, commanded by Lieutenant General Chowne, consisting of the 28th and 34th regiments, under Colonel Wilson, and the 6th Caçadores, was directed to carry the castle of Miravete.

The centre column, under Major General Long, consisting of the 6th and 18th Portuguese infantry, under Colonel Ashworth, with all the artillery, was ordered to advance by the high road to the pass of Miravete.

The right column, under Sir R. Hill's personal directions, consisting of Major General Howard's brigade, the 50th, 71st and 92d regiments, to make a considerable detour to the right, in order to cross the sierra at the pass of Puerte de Cueva, and descend from thence on Almaraz.

Artillery.

Lieutenant Thiele to accompany the left column to the attack of Miravete, with one serjeant and twenty rank and file of the British and Portuguese artillery; and to take with him

Two boxes, each containing fifty pounds of powder for breaking open barriers, and fitted to sling on handspikes for conveyance.

Three lintstocks dressed with match.

Twenty common spikes.

Three claw hammers, six prickers, fifty tubes, six portfires, and some wet clay.

Lieutenant Love to march with the right column to the attack of the works at Almaraz, with one serjeant and twenty British and Portuguese artillery-men; and to take with him

Two boxes, each containing fifty pounds of powder for breaking open barriers, and fitted to sling on handspikes for conveyance.

Three lintstocks dressed with match.

Twenty common spikes.

Three claw hammers, six prickers, fifty tubes, six portfires, and some wet clay.

Engineers.

Major Squire had become so seriously ill as to be obliged to remain at Truxillo, and Lieutenant Wright moved with Sir Rowland Hill's staff.

The following implements and tools were delivered to the troops, viz.

To Colonel Wilson's brigade.

Six long scaling ladders.

Two crow bars.

Eight felling axes.

To General Howard's brigade.

Six long ladders.

Four crow bars.

Twelve felling axes.

Five broad ditto.

MOVEMENTS TO THE ATTACK.

The march of General Howard's brigade to gain the pass of Cueva was considerably longer than had been expected; but no great difficulty was experienced in reaching the top of the sierra. The descent, however, on the other side, was by a steep and intricate winding goat path amongst rocks, and occasioned such delay in the movement of the column that it



was broad day-light before the troops were half-way down.

17th May.

All hope of a surprize being in consequence at an end, Sir Rowland Hill ordered the brigade to halt, and afterwards made it retrograde to the rear of the Puerte de Cueva, where it bivouacked out of sight of the French posts.

General Chowne with his column ascended the ridge and advanced close to the castle of Miravete; but on examination its defences proved so much stronger than anticipated, that it was not thought assailable without the aid of artillery, and in consequence he desisted from the attack.

The centre column reconnoitred the pass of Miravete, and found it so well protected by the venta and chain of fortified posts between it and the castle, that to force through the pass was also considered impracticable.

RECONNOISSANCE.

The whole of the 17th passed in examining the ridge of hills, to try and discover a passage for the artillery into the valley of Almaraz. A situation was found where the guns might have been lowered down the precipitous bank, but to have moved them out again would have been such a long and difficult operation that it was not deemed advisable to try the experiment.

The three bodies of troops passed the night en bivouac on the mountain.

18th May.

This morning Lieutenant Wright was sent out to gain all the information possible respecting the works and the ground around them, whilst the artillery officers should renew their search for an opening to get their guns forward. The result of these examinations taking away all hope of forcing the pass of Miravete, or of finding any other passage over the ridge practicable for artillery, the enterprise must have been abandoned, without some extraordinary decision on the part of its commander. Happily that was not wanting, as will be seen below.

PROJECT OF ESCALADE.

The reconnoissance of the morning having ascertained that the garrisons were all perfectly quiet and unsuspicious, and every account agreeing that General Foy had made no movement from Talavera for their support, Sir R. Hill resolved to leave his guns on the mountain and seize the opening afforded by the goat's path through Ramangorda to attempt, by a bold and dashing enterprise with a column of infantry alone, to escalade fort Napoleon and the tête-de-pont.

It was proposed to aid the escalade by appearing unexpectedly before the forts-at day-break, to effect which the mountain must be descended in the night, and as the short returns of the path amongst the rocks would render it very tedious, if not impracticable, to carry down ladders of the length of 32 feet, they were ordered to be cut into two lengths.

As a preliminary arrangement, General Howard's brigade at the Puerte de Cueva, from whence the attack was to be directed, was reinforced by the 6th Portuguese infantry, a company of the 60th rifles, and the artillery detachment from General Chowne's column.

MOVEMENTS TO THE ESCALADE.

At nine P. M. the troops began to descend the sierra, and the head of the column arrived in the vicinity of fort Napoleon at day-break; but from the difficulties of the road, although the distance from La Cueva did not exceed five or six miles, a considerable period elapsed before the rear closed up. Luckily, however, some intervening hills admitted of the head of the column being kept concealed from the garrison, at about 800 yards distant; and the troops remained undiscovered till completely formed.

19th May.

Soon after day-light, as had been concerted,

under the expectation that it would be almost a simultaneous effort with the escalade of the forts, General Chowne made a false attack upon Miravete, and the 24-pounder howitzers commenced a distant fire of round shot and spherical case against the castle. This firing naturally attracted the attention of the garrison of fort Napoleon, and put them on the alert. They crowded on the parapet and watched with earnest curiosity the defensive efforts of their comrades in Miravete, but did not seem to have the slightest suspicion of the blow about to be struck against themselves.

EXECUTION OF THE ESCALADE.

About 8 A. M. the rear of the descending column having closed up, the 50th Regiment and one wing of the 71st moved forward to the assault of fort Napoleon, regardless of a brisk fire that opened on them as soon as discovered. They descended into the ditch of the outer work at three points, and immediately reared the ladders; but from the great breadth of the berm, the ladders could not be made to rest against the parapet. Each party, however, without being dismayed or confused, immediately ascended to the berm and took footing upon it; then drew up the ladders, fixed them on the berm as a second operation, and almost

simultaneously mounted the parapet against a vigorous resistance.

As soon as fifteen or twenty men were on the top of the parapet, the defenders of the exterior line gave way, and made for the communication to the retrenchment. This was by a narrow door-way through a small building covered by the parapet of the outer line, from which a narrow bridge led to the inner defence and seemed to render it secure; but the assailants followed the garrison so quickly that they entered the door-way together, and a sharp but momentary contest took place, in which the French commandant was wounded and made prisoner. Overpowering numbers of the troops having now escalated the fort, the garrison abandoned the retrenchment and the tower, and fled in the greatest confusion to the tête-de-pont, the assailants pursuing them so closely that both parties pushed together into that work, when all resistance ceased. The flying enemy crowded on the bridge to escape across the river, but those first over cut away three of the boats, in consequence of which a number of men and officers leaped into the river and were drowned, and the remainder, above 250, were made prisoners.

The garrison of fort Ragusa, seeing what had happened, opened a fire of artillery against fort

Napoleon, but Lieutenant Love with his artillery-men most promptly turned the guns of Napoleon against Ragusa, and after he had fired a few rounds, the French garrison evacuated the fort, made a hasty formation at the foot of the glacis, and then marched off towards Naval Moral.

LOSS OF THE ASSAILANTS.

The reduction of these formidable works was thus effected by means of the musket and bayonet alone, with the loss of 2 officers and 31 men killed, and 13 officers and 131 men wounded; amongst the latter were Lieutenant Wright of the engineers and six rank and file of the British and Portuguese artillery.*

* This loss can scarcely be considered the amount likely to occur in the escalade of similar works when well defended. No doubt the decision, the arrangement, and the spirit of the attack were the principal cause of the assailants not having suffered more; but the errors of the defence also saved them many lives. For instance, the ditch of the inner work or retrenchment of fort Napoleon being strongly palisaded all round, if the commandant had secured the entrance of the retrenchment, and sacrificed the defenders of the outer work, the complete reduction of the fort would still have been very difficult, even after the first success; or at all events the garrison would have gained time to recover from their panic, and secure the *tete-de-pont*. Again, no attempt at defence was made in the tower of fort Napoleon, which, if occupied by a few men, might have made considerable resistance, and occasioned great loss to the assailants.

DESTRUCTION OF THE WORKS.

The bridge was soon rendered passable by means of two or three spare boats and some plank found on the left bank, and measures were taken for the immediate destruction of the works and stores. The towers and magazines in both forts and in the tête-de-pont were blown up,* and all the guns thrown into the river. The palisades, being taken up and collected into a pile, with the barriers, pontoon carriages, (sixty in number) and the various implements of wood, were set on fire and utterly consumed.

As soon as the destruction on the Ragusa side was complete, the bridge was hauled over to the left bank, and the superstructure, with many empty casks, and a variety of combustible articles, being placed on the boats, the whole were set on fire and burnt till nearly consumed.

* To blow up the towers, six barrels or 450 lbs. of powder were placed on the centre of the basement floor; and for the greater security of the miner, the powder was exploded by means of quick-match and a train carried up to the first floor, at which level the entrance gate was placed.—Notwithstanding this precaution, Lieutenant Thiele, of the German artillery, who undertook to light the portfire that communicated with the train in the tower of fort Ragusa, perished in the explosion. This accident could only be accounted for by supposing that, in laying the train, some powder had been scattered on the floor without being observed, and that sparks from the match or portfire had fallen upon it. The towers were utterly demolished by the explosion.

After this the store-houses in the tête-de-pont with their contents, consisting of timber, tools, rope, &c. &c. were set on fire, by which time night had set in, and Sir R. Hill had retired with the troops to Puerte de Cueva, leaving only a small detachment to cover the operations of those employed in the work of destruction.

20th May.

This morning a strict examination was made to ascertain if any thing combustible remained to be destroyed, when a magazine containing more than five hundred loaded shells, with many combustibles and cartridges, which had escaped observation on the preceding day, was discovered by Lieutenant-Colonel Dickson close to the ruined tower of fort Napoleon. It was immediately exploded, when nothing further remaining to be destroyed, the covering party marched to join the corps at Jaraceijo, where it halted for the night.

21st May.

The corps returned to Truxillo and remained there during the 22d and 23d. Both officers and men learnt with the greatest regret that Lieutenant-Colonel Squire had died on the morning of the 19th.

24th May.

The corps marched to Miajadas.

25th May.

Sir R. Hill's head-quarters were at St. Pedro.

26th May.

The corps reached Merida.

29th May.

The howitzers and pontoons marched for Elvas, where they arrived on the 31st May.

The garrisons of the works in the pass of Miravete were, by the success of this enterprize, completely isolated, and being watched by the guerrillas, it was not till the 11th July, when on the point of capitulating from famine, that the French found opportunity to march to their relief. They then blew up their several posts on the Sierra, and the pass of Almaraz became completely open.

CHAPTER VIII.

REDUCTION OF THE FRENCH FORTIFIED POSTS
AT SALAMANCA, IN JUNE, 1812.

THE very essential object of preventing the French armies on the north and south of the Tagus readily combining their movements having been attained by the destruction of their bridge and works at Almaraz, as detailed in the preceding chapter, the next enterprize of the Earl of Wellington was to dislodge the French from the town of Salamanca, where they kept a considerable depôt of stores and ammunition; for the protection of which, and to command the passage of the Tormes, they had constructed formidable works, which also served as a citadel to keep the inhabitants in subjection.

With this view his Lordship directed the arch of the bridge over the Tagus at Alcantara, destroyed in 1809, to be repaired, and on the 31st May sent orders to Elvas for the train of six 5½ inch howitzers, prepared for the reduction of the works of Almaraz, to cross over the bridge the moment it should be rendered passable, and to move by Perales on Ciudad Rodrigo.

Lieutenant-Colonel Dickson, charged with this movement, was directed to bring with him as many spherical case shot and common shells as his means of conveyance would admit; but to give a preference to spherical case, as measures would be taken to have round shot and powder in readiness to meet the train at Rodrigo. The company of British and the company of Portuguese artillery were directed to continue with and accompany the howitzers.

3d June.

Agreeably with these instructions, the round shot were all put aside, and the proportion of ammunition was regulated as follows:—

	Spherical.	Common case.
In 12 limber waggons, at		
45 rounds each, . . .	300	240
In mule and bullock carts,	300	160
	<hr/>	<hr/>
Total 1000 rounds with } powder complete, }	600	400

7th June.

The howitzer equipment marched from Elvas as follows:—

Howitzer brigade, partly drawn by mules and partly by bullocks.

Reserve ammunition, entrenching tools, and

other stores, in 30 bullock cars and Spanish mule carts.

Two ladder carriages as before, carrying also spare articles for repairs, each drawn by 4 pair of bullocks.

7th June.

Lieutenant-Colonel May was detached from head-quarters at Fuente Guinaldo to Almeida, to prepare and bring forward as speedily as possible,

4 iron 18-pounders, drawn by 10 pair of bullocks each.

600 24-pounder shot, in 20 bullock carts, being intended for the howitzers from Elvas.

400 18-pounder shot, in 10 bullock carts.

60 barrels of powder, in 10 bullock carts, for the howitzers from Elvas.

30 barrels of powder, in 5 bullock carts, for the 18-pounders.

Spare stores in 5 carts.

20 ladders on a transporting carriage drawn by 5 pair of bullocks.

11th June.

The foregoing equipment of guns marched from Almeida to Gallegos; on the 12th, to Ciudad Rodrigo; the 13th, to Santos Espiritos; the 14th, to St. Martin del Rio; the 15th, to

Tejadillo; and on the 16th, to Calzadilla, on the left of the Tormes.

The equipment of howitzers from Elvas reached Alcantara on the 9th June, but the bridge was not in a state to admit of their crossing the Tagus till the 11th June.

12th June.

The howitzers reached Perales, having been joined by sixty pairs of mules from a Portuguese field-brigade, which greatly aided their movements, and on the 13th, continuing their march by Peña Parda, Fuente Guinaldo, and Ciudad Rodrigo, arrived at St. Martin del Rio on the 17th June.

17th June.

To keep pace with these movements, the army had broken up from its cantonments on the 14th, and this day crossed the Tormes early by the ford of Santa Martha, one mile above the city, and by that of El Canto, four miles below it.

The sixth division, under Major General Henry Clinton, immediately invested the French works, whilst the remainder of the army was placed in position, to cover the attack, on the heights of Christoval, three miles in advance of the town, having its right on the Tormes near

Cabrarizos, and its left near Villares de la Reyna, on a stream which falls into the same river below the town.

RECONNOISSANCE.

On reconnoitring the works from the cathedral and other high buildings, they were found to be far more respectable than had been supposed; the information regarding them on commencing the march having been only to the extent that some convents had been fortified, and a confused sketch of the buildings by a Spaniard, not a military man. (*Plate VI.*) They consisted of a fort on the north-west of the city, formed out of the large convent of St. Vicente, which stands in the centre of an angle of the old town wall, which is there very lofty and built on a perpendicular cliff over the river. The windows of the convent had been closed up with masonry and loop-holed, and its exterior connected on both sides with the town wall, by lines of works, with masonry scarps and counter-scarps loop-holed, and the embrasures arched over.

A re-entering angle of the convent (A), not enclosed by these lines of works, was occupied with a fascine battery, protected by a loop-holed wall, having a row of strong inclined palisades

Captain Eligé (killed).

——— **Power.**

——— **Greene.**

——— **Dynely.**

——— **Thompson.**

——— **Michell.**

Lieutenant Seward.

——— **Phillips.**

——— **Johnstone.**

——— **Shaw.**

——— **Woodyear.**

——— **Pascoe.**

} **Staff.**

Ordnance and Ammunition.

The equipment from Almeida crossed the Tormes at a ford below the town on the afternoon of the 17th, and entered Salamanca at 9 P. M. It was there joined by three 24-pounder howitzers, taken from a field-brigade with the army, making the total for the attack,

18-pounder guns, . . . 4

24-pounder howitzers, . . . 3

Ammunition.

18-pounder shot, . . . 400

24-pounder ditto, . . . 600

The gunners were furnished from the field-brigades.

PROJECT OF ATTACK.

This extreme paucity of means necessitated

the attack being of the simplest nature, and it was proposed merely to breach the main wall of the convent of St. Vicente, from a battery, No. 1, to be erected on a favourable spot at 250 yards from the wall to be breached, and 200 from the covered-way of the fort, and as soon as the breach should become practicable to give the assault.

JOURNAL OF THE ATTACK.

Night of the 17th June.

Working party, 400 men.

About 10 P. M. battery No. 1, and its communications were commenced; but it being nearly full moon, the work was soon discovered by the enemy, and a fire of musketry directed on it. The night was very short, and the ruins rendered it impracticable to excavate either the interior or exterior of the battery, and the mass of earth for the parapet was brought from a distance in baskets. None of the workmen had served at the previous sieges, and under these unfavourable circumstances little could be done, and the battery at day-light was not raised to the height of the genouilliere.

The ditch of the fort presenting a considerable obstacle to the assault of the proposed breach, Lieutenant Reid, with 4 miners of the line, protected by 20 men of the covering

party, was ordered to attempt to blow in a part of the counterscarp opposite to the intended breach. The glacis in its front not being complete seemed to offer cover to the miners, but all attempts to approach the ditch undiscovered were rendered vain by a dog, which on every movement gave the alarm to a picket outside of the fort, at a short distance from the spot. The picket was in consequence driven in, and the miners set to work at all hazard, but the spot not proving secure from the plunging fire from the top of the convent, and several men having been wounded, the party was withdrawn.

18th June.

Working party, 200 men.

The battery did not afford sufficient cover to work in by day, and the workmen were placed in the communications, &c.

A battalion of light infantry of the King's German Legion, of about 800 strong, joined to take the day duty of the pickets and firing parties. They were immediately put on duty, and being dispersed under cover, amongst the ruins, by a continued and well directed fire silenced that of the garrison, except from their loop-holes.

In the evening; two field-six-pounders were

placed in the upper windows of the convent of St. Bernardo (a building a little north of the hospital), and opened at 5 P. M., with round and spherical case shot, upon the artillery in the fort; but did not succeed in keeping its fire under.

Night between 18th and 19th June.

Battery No. 1 was completed and armed with four 18-pounders, and three 24-pounder howitzers.

A battery No. 2, for the two remaining iron howitzers of the field-brigade, was thrown up in a good situation for assisting to breach the convent of St. Vicente; and cover was also made for two brass field-howitzers on a small height to the right of St. Bernardo, favourable to enfilade the side of the fort opposed to the breaching batteries.

19th June.

At 6 A. M., No. 1 battery opened with seven pieces, to bring down part of the wall of the convent, at the distance of rather more than 250 yards, which was effected by 9 o'clock as low down as the counterscarp would permit the wall to be seen. About that time battery No. 2 being finished, a 24-pounder howitzer was withdrawn from No. 1, and No. 2 was armed

howitzers against a re-entering angle of the convent. (A) It soon pierced through the lower part of the wall, when at one round a considerable portion of the convent, with the roof, suddenly came down with a tremendous crash, and the interior of the building became quite open to view. Carcasses were then fired into the interior in hopes of setting the convent on fire, but the exertions of the garrison prevented them taking effect. The defenders must, however, have sustained a great loss of men when the wall gave way, as it was at the moment of its fall thickly lined with tirailleurs firing through the loopholes.

The moment No. 2 opened, the garrison abandoned an excellent fascine battery, but they maintained a very brisk fire of musketry and from seven pieces of ordnance till dark, by which Lieutenant Love was wounded and fifteen artillery-men killed or disabled.

After this day's battering, there only remained sixty 18-pounder shot and one hundred and sixty 24-pounder shot for the further prosecution of the attack.

Marshal Marmont advanced with 15,000 men, and after manœuvring for some time in front of the position of Christoval, took up ground below it just out of cannon shot.

One brigade of the 6th division in conse-

quence marched to the camp in the evening, and the attack was suspended till more ammunition could be brought up.

21st June.

Reinforcements joined the enemy, but no movement was made; the armies remained close in front of each other; the French in the bottom, the allies on the heights.

All the ordnance was drawn out of the batteries last night, and in consequence of the approach of the French army, the 18-pounder guns and stores were sent off this morning to Doniñas, and the 24-pounder howitzers joined the army on the position of St. Christoval.

22d June.

The brigade of the 6th division, which went out to camp, returned to Salamanca, and the German light infantry went out.

As possession of the Gayetano redoubt would give great facility for establishing a lodgement close to St. Vicente, from which a mine might be carried under it, or the convent set on fire, it was proposed to expend the remaining 220 rounds of ammunition in an attempt to breach the gorge of that work. At night, battery No. 3, for four guns, was thrown up with these views,

at a spot from which the gorge of Gayetano could be seen obliquely at 450 yards distance.

23d June.

The French army retired during the last night, in different columns, and the cavalry was ordered to follow it. At 4 P. M. the Earl of Wellington receiving information that one of the enemy's columns had crossed the Tormes about twelve miles above Salamanca, he immediately ordered two divisions to the ford of Sta. Martha, and went himself to the camp to counteract any movement Marshal Marmont might make to succour the forts, or to draw off the garrison.

The 18-pounders and howitzers returned to Salamanca early this morning, and battery No. 3 was immediately armed with

18-pounder gun	1
24-pounder howitzers	3

Two 24-pounder howitzers were run into No. 2, to fire shells.

The four pieces in No. 3 opened their fire at 11 A.M., and continued it till all the round shot were expended, but without success in making a practicable breach in the gorge of Gayetano. The 24-pounder howitzers were defective both in force and precision, besides which the position of the battery was very oblique to the object, and their shot glanced off

the wall at this distance of 450 yards, without making any apparent impression upon the masonry.

The parapet of Gayetano, however, being much injured, and the palisades beaten down, an attempt was ordered to be made at night to carry that work, and also La Merced, by escalade. The undertaking was difficult, and the troops seemed to feel it. At 10 P.M. the storming party advanced, attended by Lieutenant Reid, with men carrying ladders. The garrisons made a determined resistance; two ladders only were reared against Gayetano; no one mounted them, and the party returned with the loss of 120 in killed and wounded; amongst the former was Major General Bowes, who directed the operation. The ammunition expended this day was

From No. 3, 18-pounder round shot - 60

24-pounder do. - - 160

From No. 2, 24-pounder shells, com-

mon and spherical - 100

24th June.

There being no round shot remaining, the 18-pounders and the 24-pounder howitzers were sent off this day to Doniñas.

By a truce in the evening the killed and wounded were removed.

At night an approach (*b c*) of 150 yards in extent was carried from the right of No. 3 towards St. Vicente, to bring a musketry fire on its artillery, which from that side was open to view.

25th June.

Marshal Marmont manœuvred on the right of the army, but without effect.

The 18-pounders and howitzers were ordered back from Doniñas.

At night a communication (*f g*) was carried along the bottom of the ravine, between the redoubts and the great fort, and a picket was lodged under the gorge of Gayetano. The garrisons were very jealous of this work, and many casualties occurred amongst the working party.

26th June.

A supply of shot from Almeida arrived this morning, viz.

24-pounder round shot . . . 600

18-pounder do. . . . 400

with powder in proportion.

No. 3 battery was immediately armed with four 18-pounders (one of which, however, was much injured in the muzzle by a shot on the 20th). This battery, intended to complete the breach in the gorge of Gayetano, was under the charge of Major Arriaga and Captain Power.

No. 2 battery, armed with four 24-pounder howitzers, to fire hot shot into the roof of the convent of St. Vicente, was under Captain Michell.

Two long 6-pounders and one brass $5\frac{1}{2}$ -inch howitzer from a field-brigade were placed in the convent of St. Bernardo, under Captain Greene, to keep the fire of the forts in check.

The batteries commenced their fire at three in the afternoon, and before sunset a tower of the convent of St. Vicente was on fire, as well as the main roof in several places; but by the exertions of the garrison these fires were extinguished.

The howitzers were ordered to continue the fire of hot shot through the night.

At dusk the communication along the ravine under Gayetano was pushed to the old town wall (*h*), and the pickets from the bridge spreading themselves along the houses to their left, Gayetano and Merced were surrounded and completely cut off from St. Vicente.

An approach (*n s*) was also opened from the ruins of the college of Cuenca, along the side of the ravine, to within forty yards of the escarpe of Gayetano. The object of this approach was to gain some ruins close to the fort, from which a gallery might be run under the defences, and a mine formed, to be used should the guns fail in effecting a breach. During the night a communication (*t u*) was also made through

some houses to within twenty yards of the cliff on which the redoubt Merced was built, with a view of mining under it likewise, the cliff being composed of a sandy stone very easy to work in.

27th June.

A hollow (*u*) in the cliff just under Merced presenting itself which would shelter the miners, and the close fire of musketry from the adjacent houses preventing the garrison from materially interrupting the communication with it, at 7 A. M. two miners of the line were attached to the hollow. They were ordered to gain 24 feet horizontal distance, on a rise of 12 feet, which it was expected would leave a line of least resistance to the redoubt of twelve feet. During the first relief 6 feet of gallery were completed.

At day-break the fire of hot shot was accelerated, and the breaching battery No. 3 resumed its fire. About 10 A. M. the breach in the gorge of Gayetano became perfectly practicable, and about the same time, a tremendous fire broke out in the roof of the convent of St. Vicente, which proved beyond the efforts of the garrison to extinguish, and the whole building was soon in flames.

The troops were formed in the trenches in the ravine (*f g h*) ready for the assault of Gayetano, when a white flag was displayed, and the

commanding officer proposed to surrender it and La Merced in two hours; which time he wished to have to represent his situation to the superior commandant in St. Vicente.

The Earl of Wellington offered him five minutes to march out, in which case he should preserve his baggage; but after trying many evasions, he said he could not comply with such terms, and was ordered to take down his white flag. In the mean time, the commandant of St. Vicente sent out a flag of truce, and offered to surrender in three hours. Lord Wellington, however, being determined not to lose the favourable moment of the convent being in flames, limited him also to five minutes, during which time he might march out with the honours of war and preserve his baggage. The five minutes having passed, and no appearance of the garrisons quitting the forts, the fire of the batteries was renewed, and shortly after the assaulting party advanced and carried Gayetano by the gorge, the garrison making little or no resistance. Some of the Portuguese Caçadores from the adjacent houses entered St. Vicente also at the fascine battery (A) without opposition, and the besiegers became masters of the whole.

The commandant stated that the garrison had extinguished eighteen fires the day before in the convent of St. Vicente.

The number of prisoners amounted to nearly 800, and there were found in the forts 36 pieces of ordnance, and a great quantity of stores and gunpowder. The ordnance and stores were given over to the Spaniards, and the works were destroyed with the latter.

LOSS OF THE BESIEGERS.

The loss of the troops during the attack was 5 officers and 94 men killed, 29 officers and 302 men wounded. The loss of the artillery was Captain Eligé and 15 men killed, Lieutenant Love and 42 men wounded.

EXPENDITURE OF AMMUNITION.

The whole of the original supply of ammunition, and about half the 24-pounder shot, and nearly all the 18-pounder shot of the second supply were expended

During the attack one 18-pounder gun and one 24-pounder howitzer received so much injury from the fire of the forts as to be unfit for further service.

OBSERVATIONS.

This operation speaks so plainly for itself as to render any observations on it nearly unnecessary. The result of the attack proves that these forts were not capable of more than two

or three days resistance against a certain proportion of artillery employed merely to batter down their exposed walls, and set fire to their interiors, and that consequently the delay and loss in their reduction must be altogether imputed to the inadequacy of the ammunition brought up.

As a post to resist the Guerrillas or the advance of a light corps, the works were very well planned and sufficiently strong; but surely the lesson the French had so recently received in the capture of Rodrigo ought to have made them hesitate, before they deemed such posts of a nature to risk the loss of 800 men in their defence when opposed to a regular army.

CHAPTER VIII.

CAPTURE OF THE RETIRO AT MADRID IN AUGUST,
AND JOURNAL OF THE SIEGE OF BURGOS IN
SEPTEMBER AND OCTOBER, 1812.

THE reduction of the French posts in Salamanca was followed, on the 21st July, by a complete victory over their army on the Tormes, and the expulsion of the intrusive king and his forces from Madrid. The Marquis of Wellington, after a sharp affair in passing the Guadaramma Mountains, entered that capital on the 12th August without opposition, the French confining their defensive efforts to the occupation of a spacious retrenched post on the site of the Retiro.

Plate VII. Figs. 6 and 7.

Those heights had been converted into an extensive citadel, with the view of overawing the city and placing the arsenal in security, and also of sheltering the inhabitants attached to the French interest, in the event of a temporary reverse or a popular tumult; and further, to admit of a small force being left in charge of the city, should circumstances demand it. To meet these

views the works had a triple line of defence. The interior was formed by the palace of the Retiro, the large building of the Museum, and the park-wall, having advanced flèches well disposed to flank it. The second defence was made of a bastioned trace of nine large fronts on a field profile, but without other outworks than a ravelin to one front and an advanced lunette. The interior post consisted of an octagonal star-fort of similar profile to the second line, almost the whole interior of which was occupied by a large square building originally a porcelain manufactory.

The post thus created had many very serious defects. First, the only supply of water secured to the defenders being the content of a small well in the star fort, little more than sufficient for the consumption of its own garrison, the exterior lines were altogether dependent for water on an aqueduct which might at any moment be cut by an enemy, and consequently could never be occupied by the numerous garrison required for their defence, nor afford refuge to any number of the inhabitants. Again, the star fort itself was scarcely susceptible of any defence against heavy guns or mortars, as the building occupying its interior might be battered down or burned, and the garrison smothered in its ruins.

The French commander-in-chief added to the inconsistencies of this post, by leaving a garrison far too small for the exterior enceintes, but much too considerable for the interior; and, as if conscious of this, committed to paper instructions to the commandant that, if seriously attacked, he should confine his efforts to the defence of the star fort. A copy of this order, left by a staff officer in his quarters, in the hurry of the retreat, was luckily found; and in consequence, on the night of the 13th, the troops were ordered to force into the botanical garden and the park opposite the circus for bull-fights. As was expected, on their approach the garrison withdrew all their posts from the outer line, and concentrated within their second defence.

14th August.

This morning arrangements were made for attacking and driving the garrison from the bastioned work, when, if they should retire in good order into the star fort, heavy guns were prepared to ruin its defences, and batter down the China manufactory in its interior. The governor, Colonel La Fond, however, seeing the badness of his post, prevented the execution of this project, by capitulating on honourable terms.

The garrison, thus made prisoners of war, consisted of 2 colonels, 4 lieutenant-colonels, 22 captains, 35 subalterns, 7 staff, and 1982 rank and file, besides 6 officers and 429 rank and file in the hospital; and there were found in the arsenal 180 pieces of ordnance, 20,000 stand of arms, with a great quantity of ammunition, artillery and other carriages, clothing and stores of all kinds.

ATTACK OF THE CASTLE OF BURGOS.

1st September.

This day the Marquis of Wellington quitted Madrid for Arrevalo, where four divisions of infantry had been ordered to assemble, preparatory to a movement to the northward, against the army beaten at Salamanca, which had reoccupied Valladolid:—The 18-pounder brigade and 24-pounder howitzers, fitted out for the reduction of the forts at Salamanca, were ordered to accompany this movement.

On the 7th, the French were driven from Valladolid, and on the 17th, being forced back on Burgos, they threw a garrison into that place of between 2,000 and 3,000 men, and retired to Breviesca.

INVESTMENT.—*Plate VIII.*

On the 19th September, the castle of Burgos

was invested by the 1st, 5th, 6th, and 7th divisions of infantry and two independent Portuguese brigades. The 6th division took up ground on the left of the Arlanzon, whilst the remainder of the investing corps forded the river, and marching round the heights of St. Michael, drove the garrison from three advanced flèches (G) which they were constructing, to see into the ravines and hollows on the side and reverse of the heights. After a good deal of skirmishing the advanced posts and sentries of the besiegers were fixed on various points of the heights where they found cover. The remainder of the army advanced and took a position across the high road to France, in front of Monasteria, to cover the attack of the castle.

ENGINEERS' MEANS FOR THE ATTACK.

OFFICERS.

Lieutenant Colonel Burgoyne, commanding.

————— John T. Jones.

Captain J. A. Williams, (killed.)

Lieutenant Pitts.

————— Reid.

Ten officers, volunteers, to act as engineers, and 81 soldiers of the line, being either miners, carpenters or masons, also volunteers, joined the department on the day of the investment;

and there were present eight rank and file of the corps of Royal Military Artificers.

A party of 200 men, was also at the same time selected from the troops, to make fascines and gabions.

Park.

The engineers' park was formed under shelter of the heights between Villa Toro and the castle, and contained—

Picks and shovels	. . . . .	600
Felling axes	. . . . .	100
Bill hooks	. . . . .	200

with a few small tools and stores, being a proportion carried on fifty mules, with the headquarters of the army.

A few days subsequently to the investment, a depôt of French tools and sand-bags was found in the town of Burgos, and moved to the park. A portion of the artificers were employed constantly in the park, throughout the siege, in superintending the making of fascines and gabions, and cutting plank for platforms. The remainder went on duty in the trenches with the officers.

ARTILLERY MEANS FOR THE ATTACK.

Officers.

Lieutenant Colonel Robe, commanding.

————— Dickson, in charge of the reserve.

Captain Power.

Lieutenant Robe.

———— **Pascoe.**

———— **Elgee.**

———— **Haugh.**

Captain C. Blatchley (Joined 1st Oct.)

———— **Gardiner.**

———— **Dansey.**

———— **Greene.**

Lieutenant Monro.

} Alternate
days from
the field-
brigades.

Major Ariga, and 5 Subalterns, Portuguese artillery.

Non-Commissioned Officers and Gunners.

British. 90

Portuguese. 57

Total 147

aided by occasional detachments from the field-brigades.

Ordnance and Ammunition.

The park was formed near Villa Toro, and contained—

18-pounder guns	3
24-pounder iron howitzers	5
24-pounder round shot	900
24-pounder common shells . . .	208
24-pounder spherical case . . .	236
18-pounder round shot	1306
Do. spherical case. . . .	100

BESIEGING FORCE.

The troops employed on the duties of the siege, were the 1st and 6th divisions of infantry, under Major Generals Campbell and Clinton, and Brigadier Generals Pack's and Bradford's Portuguese brigades, composing altogether a force of twelve thousand men.

RECONNOISSANCE.—*Plate VIII.*

Immediately, on being invested, the place was reconnoitred.

The defences were found to occupy an oblong, conical hill, and to be of a triple nature nearly all round. The lower or outer line consisted of the old escarp wall of the town or castle, modernised with a shot-proof parapet, and flanks ingeniously procured by means of palisades, or tambours, at the salient and re-entering points.

The second line was of the nature and profile of a field retrenchment, and well palisaded.

The third, or upper line, was nearly of a similar construction to the second; and on the most elevated point of the cone, the primitive keep had been formed into an interior retrenchment, with a modern heavy casemated battery, named after Napoleon.

The situation of this fortified post was very

commanding, except on the side of the hill of St. Michael (*Plate IX. Fig. 1.*), the summit of which, at less than 300 yards distance, is nearly on the same level with the upper works of the castle, but separated from them by a deep ravine. This height was occupied by a hornwork of large dimensions; the front scarp of which, hard and slippery, 25 feet in height, stood at an angle of about 60°, and was covered by a counterscarp 10 feet in depth. The branches were not perfect, and the rear had been temporarily closed, on intelligence of the fall of Madrid, by an exceedingly strong palisading. No part of the front or branches was palisaded or fraised.

The whole of the interior of the hornwork was under fire of the battery Napoleon, and its branches were well flanked from the works of the castle.

From the best information, the garrison consisted of 2,000 men, with 9 heavy guns, 11 field-pieces, and 6 mortars or howitzers, in battery; and the place was well provided with ammunition and provisions.

The side of the castle selected for attack, was that under the south end of the church of La Blanca, because it presented the smallest front, and the fall of the hill there (*Plate IX. Fig. 2 and 3*) was so rapid, that the guns

mounted in the works could not be sufficiently depressed to see down it; and further, each of the lines on that side were faulty and weak.

The outer wall, but imperfectly flanked, had a thick parapet of earth without embrasures, and might be attacked on its left flank as well as in front. The second line had likewise little preparation for front fire, and its parapet and escarpe were much exposed to the hornwork of St. Michael, the (obtaining possession of which was a necessary preliminary to an attack on any side, except that of the city,) and the upper defences had no space within them, being encumbered with the church of La Blanca, a weak building, which presented few defensive resources.

The interior lines were palisaded or fraised, but, from their weak profile and bad trace, were not esteemed capable of resisting an assault, after they should have been cannonaded for a short time, by batteries to be erected for that purpose on the hill of St. Michael; and as the extremely limited means of the artillery would not admit of any further aid being drawn from their fire, it was proposed to attempt each line successively, by assault, after the preceding line should be well secured by a good lodgment, with safe communications to it; and the

Following detail of the operations received the sanction of Lord Wellington.

DETAIL OF THE PROJECT OF ATTACK.

Plate VIII.

The first night, to assault the hornwork of St. Michael, and make a lodgment in it, with proper communications from the rear. The following night, to commence battery No. 1, for five guns, under cover of a rising knoll, which battery should see the part of the castle to be attacked, and itself be protected by the knoll from the heavy fire of the battery on the keep of the castle—then to strike out a communication from the suburbs of St. Pedro, and

under cover of a steep bank, at 50 yards from the wall, establish a parallel, and connect it with the upper works. From the parallel, to approach the wall by sap, as near as its superior height would admit without being seen into; and from that point to run galleries under the escarp, and form breaches by mines. A short time before the period of springing the mines, to open from battery No. 1. on the second line; and during, and after the assault, to maintain such an incessant fire upon that line, as should prevent the garrison collecting a force within it to annoy the troops whilst forming the lodg-

ment on the breach in the first enclosure. In similar manner, it was proposed, when the lodgment should be finished above the first wall, and the troops prepared to assault the second line, to turn the fire of battery No. 1 on the third line, as had been practised against the second line. Afterwards to employ that battery to knock down part of the enceinte of the third line, in front of the church of La Blanca (H), which, for want of space, had been formed of a loop-holed wall, only two feet thick. On carrying the second enclosure, either to lodge in it, or on the upper terre-plein, where the loop-hole wall had been knocked down, as circumstances should point out. To favour these operations, a trench for musketry, *pp*, to be made on the brow of the hill, and a concealed battery (No. 2) to be prepared in the interior of the hornwork, in readiness to receive all the guns and howitzers, on the fall of the third line, to batter the keep, should the garrison be obstinate enough to offer a resistance in it, after the loss of all their other defences.

JOURNAL OF THE ATTACK.

Night between 19th and 20th Sept.

The hornwork was ordered to be assaulted this evening at 8 p. m.

ARRANGEMENTS FOR THE ASSAULT.

The arrangements for the attack were, that two parties to storm should march, one upon each salient angle of the demi-bastions, and enter the ditch at points where the counterscarp was still unfinished. At the same time that these parties should advance, a firing party of 150 men to march direct on the front of the work, halt at the edge of the ditch, and keep up a brisk fire on the garrison defending the parapets: under protection of this fire, the storming parties in the ditch to raise the ladders against the faces of the demi-bastions, and escalade them. A third storming party, under Major the Honourable Edward Cocks, 79th regiment, to be formed behind the fleche (G c), to march round the rear of the work, and endeavour to force in at the gorge.

EXECUTION OF THE ASSAULT.

The firing party, on being put in movement, were discovered by the garrison of the hornwork, and instantly a heavy discharge of musketry was directed on them from the whole front. This fire induced the British line, contrary to orders, to open their fire also, although 120 yards distant from the hornwork; and the

men continuing to fire whilst advancing to the edge of the counterscarp, by the time they reached that alignment, such numbers had been killed or wounded, that the few remaining able to move, dispersed.

The Portuguese troops allotted for the escalade of the left demi-bastion, were preceded by a party of Highlanders under Lieutenant Pitts, Royal Engineers, carrying the scaling ladders. The Highlanders coolly raised the ladders against the escarpe, and the attention of the garrison being much occupied by the firing party, they mounted to the upper staves of the ladders almost without opposition ; but the assaulting party, notwithstanding this stimulating example, could not be prevailed upon to enter the ditch.

The escalade of the right demi-bastion was also unsuccessful.

During this time Major Cocks had led his party along the glacis of the branches into the rear or gorge of the hornwork, but not without the loss of nearly half his numbers from the fire of the castle. The principal strength of the garrison being engaged on the ramparts in repelling the attack in front, and only a few men being left for the defence of the gorge, the scaling ladders were placed against the palisades

with but little opposition, and the assailants scrambled over them into the work.

Major Cocks then divided his detachment into two bodies, and with one pushed forward and ascended the parapet of the front to facilitate the entry of the co-operating force, whilst the other moiety should remain formed at the gateway to ensure the garrison being made prisoners; but they, from weight of numbers, literally ran over the party left to oppose them, and mostly escaped into the castle.

The loss in carrying this hornwork was 6 officers and 65 men killed, 15 officers and 334

• got wounded, which casualties occurred almost exclusively amongst the firing party in front, and the troops that escaladed the gorge.

The French Official Journal states the loss of the garrison to have been 6 officers and 137 men killed or wounded.

Seven field-pieces were found in a serviceable state on the ramparts.

As soon as the hornwork was carried, the lodgment *de* was formed, and a communication to it from the rear of the hill, along the ditch of the front, and through the gateway. The working party was 300 men.

The fire directed on the lodgment from the castle was very heavy throughout the night;

but there was urgent necessity for persevering with the work, as the besiegers, being without any communication to the gorge round the branches, the garrison, unless a lodgment were established in the interior, might recover the work by a sortie at day-light, or at least might bring on a very unequal and destructive affair under a close fire of the artillery of the castle.

20th September.

The lodgment in the hornwork afforded sufficient cover at day-light to continue the work, and 150 men were employed throughout the day to improve it, and form secure communications from the rear.

The garrison kept up a vigorous fire all day on the work in progress; but the workmen being much circumscribed for space, it was thought better to keep the guard of the trenches under cover, than to reply with musketry; and they were placed along the ditch of the front of the hornwork, and on the reverse of the hill where cover could be found, two or three sentries only being posted within the hornwork.

Night between 20th and 21st Sept.

Working party, 600 men.

Battery No. 1, for five guns, was begun, and

the approaches to it *ff*, in front of the left branch of the hornwork, were opened.

The garrison kept up throughout the night constant discharges of shot and shells from howitzers on the workmen; but the battery was so well shut in from the right of the castle, by an inequality of the ground on its left flank, that few casualties occurred.

21st September.

Working party, 150 men.

Fifty men were distributed in battery No. 1, and the remainder to perfect the trenches and communications, which was the employment day and night, during the remainder of the siege, of every man not required to open fresh ground.

The garrison fired a good deal, but without any particular object.—During the last night they mounted several additional pieces of ordnance to bear on the approaches.

Night between 21st and 22d Sept.

Working party, 600 men.

A trench of support, *g g*, to battery No. 1 was opened this evening, and the communication *e g* from the lodgment in the hornwork.

In carrying this communication through the

rear defences of the hornwork, which were formed of a palisaded line, on a higher level than the ground in its rear, the greatest difficulty was found in obtaining cover; and the garrison maintaining a constant fire of grape, round shot and shells, on the working party throughout the night, a space of some yards remained very imperfect at day-break (T).

The guard of the trenches was chiefly placed in the approaches *f f*, or under cover of the flank of the hill, having a strong detachment prepared to stand to their arms in the lodgment in the hornwork.

22d September.

Soon after day-light the garrison directed a most heavy fire of artillery against the work opened last night; but there being good cover every where, except at the fall of the ground at the rear of the hornwork, the parties continued to labour throughout the day with little loss.

A portion of the guard was posted in the advanced parts of the trenches, and some men on the left of No. 1 fired with great effect at the distance of 200 yards.

Night between 22d and 23d Sept.

Working party, 600 men.

Battery No. 1 was armed with two 18-

pounders and three 5½-inch howitzers, in readiness to open on the interior lines of the castle, whenever the outer line should be assaulted.

Battery No. 2 for six pieces, intended to bring down the keep of the castle, whenever the earthen lines should be carried and the enemy's artillery silenced, was commenced at the gorge of the hornwork of St. Michael.

The working parties continued to perfect the communications, &c., and the exposed point at the gorge of the hornwork was well filled up with gabions and fascines.

With a view to abridge the attack, and save the troops from unnecessary fatigue, Lord Wellington determined to make an effort to carry the exterior defences of the castle by escalade, and form a lodgment on the top of the wall.

The escarpe wall at the point selected (P) was from 23 feet to 25 feet in height, built on a steep bank, but without any reveted counter-scarp; and midnight was the hour fixed for the enterprise.

ARRANGEMENT FOR THE ESCALADE.

A party of 400 men, provided with five ladders, to be carried by six men each, was directed to march into the hollow road *hi*, running from the suburbs of St. Pedro parallel to the wall to be assaulted, about sixty yards from

its foot, in the bottom of which they would find themselves in security from the fire of the place. Half the party, that is, 200 men, to take post near the top of the bank *r k*, and arrange themselves in line, so as to fire over the bank against the work to be assaulted, with the view of preventing the garrison from mounting the thick earthen parapet to use their bayonets.

The other 200 men were to be divided into sections of twenty men each, and, on the ladders being reared against the wall, an officer, with the first section, was to advance from under cover of the bank and mount to the assault. That accomplished, the next party of twenty to advance from under the bank and follow up the ladders: these to be succeeded by other twenty men, and so on successively till the whole 200 should be in. The firing party on the bank then to become a working party, and pull down a portion of the wall to form a ramp up. For this latter purpose, and to make a secure communication to the spot from the trenches, a more considerable working party was held in readiness by the engineers, with gabions, fascines, &c.

To favour this escalade, a Portuguese battalion was ordered to assault the same line by its left flank on the side of the town, at a point (D) where the defences are of a weak profile, and

where the garrison only kept a small guard, not yet having any suspicion of its being the intention to direct the principal effort against the south end of the castle.

EXECUTION OF THE ESCALADE.

The attack of the flank defences by the Portuguese battalion never came to any thing like a serious attempt. They were checked whilst advancing by a fire from a guard-house on the line, and did not enter the ditch. The escalade in front, therefore, even if correctly executed, would not, probably, have had more than a momentary success. As it was, the men with the five ladders reached the wall, and reared them almost unopposed; but the main body, although the ground was perfectly open, advancing on a front of only four men, had lengthened out so considerably before they reached the point of contention, that, on the garrison opening their fire, much confusion was created by the efforts made to close up the ranks, and, in consequence, the firing party never took post on the bank, but the whole pushed forward together into the ditch. Several gallant attempts were made to ascend the ladders, and some of the assailants each time gained a momentary footing, but were as often bayoneted down; after which the garrison mounted on the top of the parapet, and in

addition to a fire of musketry, threw over a great number of 4-pound shot and much burning composition, which caused many of the men's pouches to explode.

Major Laurie, 79th regiment, the commanding officer, being killed, and the party being composed of detachments from different regiments, (a measure replete with ill for night movements or hazardous enterprises,) there was some difficulty in ascertaining who was the senior officer, and the whole remained for above a quarter of an hour under the destructive efforts of the garrison, "unable to advance, unwilling to retire, and having given up all hope of success." At length, the point of seniority being determined, and all the officers agreeing in the necessity of withdrawing, the order was given, and the remnant retired, leaving nearly half their numbers killed, or lying wounded under the wall.

23d September.

This morning the garrison fired with more than their usual vigour, and particularly concentrated discharges of all natures against that portion of the communication through the rear of the hornwork, blinded with gabions (T), and, in the course of two or three hours firing, succeeded in levelling most of the parapet. The

working party, however, continued in battery No. 2 throughout the day.

At one P.M. a truce of two hours admitted of bringing into the trenches the men wounded during the escalade last night, and who, having fallen in a most exposed situation within a few feet of the escarpe wall of the place, it had been hitherto impossible to succour.

Night between 23d and 24th Sept.

The attack by escalade having failed, it became necessary to revert to the original project of forming a breach in the outer or first line, by working up to the wall, and forming a mine under it.

With this view, at dusk, pickets of direction were put in for converting a hollow road, at fifty yards distance from the outer-line, into a parallel, by cutting steps along the summit of the bank (*r k*). A communication, from the suburbs of St. Pedro to this advanced trench or parallel, was also traced.

Two hundred and fifty men, furnished with 380 gabions, opened this ground, undiscovered from the castle. Soon after 9 P.M. heavy rain began to pour down.

24th September.

Notwithstanding the rain, the work opened

last night was every where tenable this morning at day-light, and fresh workmen were distributed throughout its whole extent.

A firing party was introduced into the parallel, to cover the progress of the trenches, which were necessarily made very deep and narrow, to gain cover from the commanding fire from the parapet of the escarpe wall of the castle.

The firing party kept the musketry of the parapets in front of the parallel so completely under, that rarely a shot was fired from thence; but two or three marksmen placed behind a projecting palisade (R), serving as a flank to the escarpe wall, did great execution, and numerous casualties occurred in the trenches in the course of the morning.

The palisades were placed close together, with only space between them for the barrel of a musket, and, the lower four feet being strongly planked, men were quite secure behind them. After ineffectually trying throughout the day to dislodge the marksmen by musketry fire, the struggle, being found too unequal, was relinquished, and it was proposed to try the fire of battery No. 1.

Night between 24th and 25th Sept.

During the afternoon a supply of fascines and gabions having been deposited in rear of the

parallel *r k*, as soon as it became dark a flying sap *m k* was pushed from the right of the parallel to within twenty yards of the escarpe wall.

The work was very perilous on account of the number of shells rolled down the bank by the garrison, and from a steady musketry fire maintained from the parapet on the right of the sap. Captain Williams, who directed this operation, was shot through the heart.

The artillery moved the two 18-pounders out of No. 1, and drew them part of the way along the trench towards No. 2.

The 18-pounders were replaced in No. 1 by two 24-pounder howitzers.

25th September.

This morning battery No. 2, reveted with sand bags, was completely finished and the platforms laid. In order to prevent the battery being recognized as such by the castle, the embrasures were filled up with earth; two very stout gabions only being placed at the interior of each cheek of each embrasure, to ensure the guns opening at any required moment.

A trench of six feet in depth, besides the height of the gabion above it, now scarcely gave cover in the sap, and the consequent difficulty of pushing it further forward became very

great; therefore, the soil appearing favourable for mining, at ten A. M. the miners of the line, attached to the engineers, commenced a gallery towards the wall from the head of the sap (*m*). The distance had been measured in the night, and found to be sixty feet.

The howitzers in No. 1 battery opened a fire to destroy the palisades (*R*) used as a flank on the outer wall, but without success, it being found that, from the want of precision in the howitzers with round shot, a greater expenditure of ammunition would be required to effect the object in view, than the limited means of the equipment would afford.

The following ammunition was expended in this attempt.

24-pounders, round shot	123	} 141 rounds.
ditto, common shells	6	
ditto, spherical case	12	

Night between 25th and 26th Sept.

This evening three zigzags (*o o o*) were carried down from No. 1 battery towards the ledge of the hill below, with the view to establish a trench or parallel for musketry fire (*p p*).

The hill to be descended with these approaches being open to the whole artillery of the castle, at distances from 150 to 200 yards, and the workmen being perfectly exposed, an appalling

fire was opened upon them the moment they began to use their tools.

The showers of grape shot, which fell without intermission all round the spot, causing an incessant whizzing and rattling amongst the stones, appeared at the moment to be carrying destruction through the ranks; but, except the necessity of instantly carrying off the wounded, on account of their sufferings, it caused little interruption to the workmen. It was remarked here, as it had been on former occasions, that a wound from a grape shot is less quietly borne than a wound from a round shot or musketry. The latter is seldom known in the night, except from the falling of the individual; whereas the former, not unfrequently, draws forth loud lamentations.

26th September.

The gallery, at the end of this day, had advanced 18 feet. It was three feet wide and four feet high; the soil stiff, and standing well without support.

The fire of musketry from behind the palisaded tambour continued to be very destructive to the workmen in the sap whenever they became exposed to it. A gabion having been knocked down by a shell this morning, Captain Kenny, 9th regiment, assistant engineer, was

shot through the head in the endeavour to replace it.

Night between 26th and 27th Sept.

This night a trench (*kt*) was made in continuation of the right of the lower parallel, and carried to within 23 yards of the wall of the rampart, with a view to run in another gallery to form a second mine (*M*) and to give cover for a firing party, to oppose that directed on the sap.

A working party of 300 men was employed on the left of the attack, and two additional zigzags (*oo*) from No. 1 battery were added to those formed last night, and the musketry trench (*pp*) was opened.

The garrison, anticipating this operation, had prepared most of their artillery and musketry to open on the ridge, which they did, with the utmost accuracy, as soon as the engineer, with a few men, began to picket out the trench. Two or three casualties occurred in effecting the trace, and it being evident that no body of men could work collectedly under such a fire, each gabion was carried forward and placed separately, the two men so employed immediately retiring, and by this means the whole row was placed with little loss. In a similar

manner, two or three gabions only were filled at the same time, till about midnight, when the whole party was at work tolerably covered, and before day-light the musketry trench was in a state to be occupied by a few men, who were directed to confine their attention and fire to the lower works and the tambour.

The total casualties of the working party did not exceed twelve.

27th September.

The attention of the garrison was now evidently directed to preparations for an obstinate defence of their second line, after the loss of their outer line. They had worked hard during the night in forming a covered way to that line, by cutting a step along the upper edge of the counterscarp, and had planted a strong stockade in front of the gate-way, to secure their communication with their new covered way.

A gallery (*t*) for a second mine was commenced at day-light, from the trench on the right of the lower parallel opened last night, and in the course of the day the trench was widened and deepened into a commodious parallel, and a firing party posted in it.

At evening the first gallery had only advanced 28 feet. The workmen, not being accustomed

to military mining, and not having miners' tools, but only the large English pickaxes, was the cause of their slow progress.

The garrison now threw stones over the wall into the nearest part of the sap, and occasionally wounded the men with them. They also pitched into the sap great numbers of hand grenades, or small shells, which, being thrown over the parapet at a high angle from the small distance of 20 or 25 yards, had much the appearance in descending of cricket balls. These drew off the attention of the workmen from their employment; but, except in the crowded parts, appeared to do little execution.

A fire of artillery was most pertinaciously maintained against the musketry trench (*p-p*) opened last night, although there were only a few men employed in the interior. In the course of the day the gabions were mostly destroyed, and the parapet, being yet little more than a screen, gave so little security, that the workmen and guard were both withdrawn.

Night between 27th and 28th Sept.

Five hundred men were ordered to parade for work at the upper trenches; but at dark only 350 could be found.

They were employed to open a trench of communication (*i o*) from the upper works, on

the right of No. 1 battery, to the lower works near the suburbs of St. Pedro, it being required for their mutual support, and for the more ready communication of orders.

About 150 yards of the communication to be opened, was along the face of a steep hill, entirely exposed to the view of the castle, at distances from 150 to 200 yards.

The workmen were spread along the communication or parallel as far as their numbers would extend, and were at work before the garrison gave them any interruption; but soon after they began to use their tools, two or three light balls, which fell amongst them, were followed by heavy discharges of grape shot.

The working party exerted themselves to the utmost, and the fire of the place, though steadily maintained throughout the night, was at no time well directed. Nevertheless, at day-break some portions of the communication remained imperfect, owing to the steepness of the hill, which rendered necessary nearly double the usual height of parapet to gain cover for a man in the trench.

The musketry trench (*p p*) was during the night brought into a state to afford good cover.

28th September.

This morning an endeavour was made to

complete the communication (*i o*), by means of gabions and fascines placed in the openings; but it was found that the reverse of the trench, being much higher than the front, the enemy's shells either stuck into it, and burst there, or, when pitched beyond it, rolled back from the hill into the trench, which rendered the work so perilous, that it was deferred till night.

In the evening, the first gallery measured 42 feet in length, and the second gallery 32 feet, the soil of the latter being similar to, and standing equally well with that of the first.

Night between 28th and 29th Sept.

At night, the parapet of the communication between the upper and lower part of the trenches was heightened and thickened, so as to afford good cover to those passing along it; but, throughout the siege, the inconvenience of its being formed on the slope of a steep hill, was severely felt, whenever the garrison made an effort to interrupt the communication by a fire of shells.

29th September.

This day the garrison confined their fire very much to small shells, which they threw in great numbers into the lower trenches.

The guard distributed in the trench *pp*, and

in the work perfected last night, kept up an incessant fire of musketry on all the works of the place.

In the evening the second gallery measured 43 feet.

About noon, when the first gallery had been driven 60 feet, the miners reported themselves to be under the foundation of the escarpe wall of the castle. This on examination appearing to be the case, from large blocks of masonry obstructing the end of the gallery, a chamber of five feet in length was ordered to be made under the wall. The excavation was finished at 10 P. M., and being charged with 12 barrels of powder of 90 pounds each, the gallery was well tamped for 15 feet, with bags filled with earth.

Night between 29th and 30th Sept.

Working party, 400 men.

At dusk, an attempt was made to extend the musketry trench *pp* on its left, so as to enclose and see down the caponniere, and bring a greater front of fire on the space above the outer line between F K. There being no gabions to spare for this service, the men were set to work uncovered, but the fire of the place was immediately concentrated on the spot, and in a

few minutes, several men having been killed or wounded, the attempt was relinquished.

SPRINGING OF FIRST MINE.

At midnight, a storming party of 300 men having paraded in the lower trenches, and a working party, with the necessary tools and materials, being in their rear to form a lodgment, the mine was sprung. The explosion made very little report, but brought the wall down (K). The earth of the rampart behind the ruined escarp remained very steep, but next the broken parts of the wall, on both sides, the ascent was easy. The breach, however, was not such as a charge of 1,080 lbs. of powder, placed as above described, ought to have produced; and the probabilities are, that the masonry which obstructed the gallery, was the remains of some old foundation, in front of the escarp wall.

ARRANGEMENTS FOR ASSAULT OF THE BREACH.

The assault was ordered to be made as follows, under cover of a vigorous fire of musketry, to be directed on the defenders from the trench or parallel *wk.* An officer and twenty men to ascend the breach; that effected, a detachment of fifty men to follow, and then the remainder of the 300 men to push up.

EXECUTION OF THE ASSAULT.

A serjeant and four men, being the advance of the leading party of twenty men, mounted the breach, and found the defenders so panic-struck, from the unexpected explosion of the mine, as to make no effort to oppose them; and these brave fellows were some minutes on the top of the parapet before the garrison recovered from their surprise. Then, seeing only five men without any support opposed to them, they rushed upon them and drove them down, slightly bayonetting two, and maiming a third.

The night being dark, and the circumstances of the case novel, the officer commanding the first division of the storming party, erred in the direction of the breach, and reached the escarp wall too much to his right; where, finding the masonry uninjured, he returned with his party into the parallel, reporting that the mine had produced no effect, and in consequence the storming party* was ordered to retire.

Soon afterwards, the serjeant and three men

* This was the first assaulting party of a breach, which advanced from the trenches in Spain, unattended by an officer of engineers, and it was occasioned by there never having been more than four engineers present: one had already been killed, one had his arm broken, a third was sick, and it was wished to preserve the other for the daily duties of the trenches.

returned, and being examined, proved the existence of the breach, by their bruises and bayonet wounds; but, as during the interval, the garrison had formed under arms, and a considerable force had marched to the breach, so as to preclude all hope of success in a second attempt, no further effort was made.

The gun ammunition not being sufficient to admit of a fire of artillery being maintained on the breach during the night, and the parallel being situated too low to admit of the musketry having effect over the wall, the garrison before day-light had formed a parapet in rear of the breach, and placed many obstacles on the ascent.

30th September.

The troops had now been working for twelve days, exposed to a close and well directed fire from the artillery of the castle, without a useful shot having been fired from their own batteries in their support, and a discouragement, which showed itself in decreased exertion and diminished confidence, began to be general. In the sap communicating with the mine, the men were excessively annoyed by the marksmen behind the projecting stockade on the top of the tower in the outer line. The musketry fire directed from that point on the sap, was so

JOURNALS OF SIEGES

close and accurate, that every man was hit who exposed himself in the slightest degree; and it came absolutely essential, that the stockade should be knocked down by fire from the teries, and orders were given to that effect. In consequence, a French six-pounder gun was taken into No. 1, and a howitzer run to it, that battery opened at 10 A.M. on the stockade (B), and notwithstanding the garrison had strengthened it by sand-bags and muskets, after three hours firing it totally demolished every palisade.

The ammunition expended in this operation was

24-pounder round shot	. . .	90
6-pounder (French) do. do.	. . .	40
5½-inch common shells	. . .	6

Captain Dansey was slightly wounded on this occasion.

From the commencement of the siege, the soldiers had been rewarded for bringing in shot fired from the castle, and the result to this date was as follows.

16-pr. shot.	. . .	340	{ made to serve for the English 18-pounders.
8-pr. do.	. . .	735	
6-pr. do.	. . .	73	{ fired from the English 9-pounder field pieces.
4-pr. do.	. . .	330	
6-inch shells	. . .	21	

The four pound shot were of no immediate use, but such was the desire to increase the stock of shot, that it was thought best to pay for all brought in, to encourage the soldiers in their search.

The effects of the first mine being lost, every exertion was used to push forward the second gallery; and not to depend upon it alone, Lord Wellington ordered a battery (No. 3) for three guns, to be constructed below the outer wall, to form a breach in the lower escarp wall.

It was proposed, to place the battery so immediately under, and close to the outer defences of the castle, that they should screen it from the fire of their own upper batteries; in which case, as there was no artillery mounted on the lower defences, the parapet of the new battery need only be musket proof, which would save both time and materials.

The second gallery measured this evening 55 feet in length.

Night between 30th Sept. and 1st Oct.

Working party, 500 men.

At dusk, battery No. 3 was picketted out, at the distance of 65 yards from the escarp wall. The operation not being suspected by the garrison, and the men working well, a good screen was speedily raised.

The artillery at the same time employed a party of 200 men of the line, to remove the three 18-pounders from the trench, near No. 2, and brought them under cover of the battery before day-light.

1st October.

The carpenters were diligently laying the platforms of the new battery (No. 3) when day broke, and the garrison discovered their occupation. In a very short time a most galling fire was directed against them, but these cool men steadily persisted till they had completed their labours at 9 A.M. The artillery then run the guns on to the platforms, and being prepared to commence battering in breach, the sappers

began to unmask the embrasures; but, whilst so employed, the garrison added to their missiles a fire of 6-inch shells, from a howitzer or mortar, which apparently they had moved to their outer line for that purpose. These shells, thrown at a high elevation with small charges, did some damage to the parapet; and very shortly afterwards the garrison made an opening in the parapet of the flank E of the outer wall, and brought a light gun to bear on the battery, which fired through its parapet every round; and, with the addition of a brisk fire of musketry on the interior, rendered it so hot, that Lord

Wellington ordered the artillery men to evacuate the battery, without the guns having ever been unmasked.

In the course of the morning the fire of the castle was increased to three guns, assisted by two or three mortars or howitzers, which nearly demolished the parapet of the new battery, disabled two of the gun carriages, and knocked a trunnion off one of the 18-pounders.

The guns from their elevated situation, and being fired from the rear of the platforms, were served all day by the garrison with little loss, although the best marksmen were selected from the guard of the trenches, and posted in different situations, from 30 to 100 yards distance, to fire in at the embrasures.

Some officers, good shots, who had frequently shown their skill in picking off individuals, attempted to play the same game on this occasion; but the French marksmen speedily drove them out of the field.—Lieutenant N . . . , assistant engineer, lost part of an ear in this personal contention.

In the evening, the gallery of the mine measured 65 feet.

Night between 1st and 2d Oct.

In consequence of the destruction dealt out to No. 3 battery, and the garrison having ob-

JOURNALS OF SIEGES

and its precise range, it was deemed better to commence a new battery, No. 4, on its left, in order to endeavour to thicken up the ruined parapet.

In the course of the afternoon a number of wool-packs had been taken from a store in the

town, and collected in the suburbs of St. Pierre, also many gabions and fascines.

At dark 150 men paraded for work at this point, and not being discovered by the enemy, contrived in the course of the night to raise a very great mass of cover. The wool-packs formed good revetements; and strong gabions stuffed with wool-packs being placed to sustain the cheeks of the embrasures, they were blinded with other wool-packs.

During the night the guns were withdrawn from No. 3, and placed under cover of a steep bank in the immediate vicinity of No. 4 battery. One gun had a trunnion off, with several injuries from shot which had struck it; another gun had been struck eleven times, and was partly split in the muzzle; one carriage was totally unserviceable, another carriage injured but repairable; the third gun and carriage untouched.

2d October.

At day-light the garrison opened with five pieces of ordnance on the new battery, No. 4,

and in a short time concentrated upon it such a fire of shells, that the parapet began to fly about in every direction, and it became apparent that under such a plunging fire the guns could never be served. Lord Wellington, therefore, ordered the working party to be withdrawn, and determined to relinquish the idea of employing ordnance in the lower attack.

Notwithstanding a constant fire of close musketry upon the breach K, formed by the first mine, the garrison continued, by means of sapping, to raise a parapet behind it, and to render the ascent difficult.

The gallery was 72 feet long this evening, and the distance being measured from its mouth to the wall, was found to be only 75 feet. It being, therefore, expected that this mine would be prepared to form a second breach (M) to-morrow, the two serviceable 18-pounders were ordered to be removed in the night to battery No. 1, in readiness to open in the morning against the breach K, with the view to render it practicable, and to beat down the parapet the garrison had constructed behind it, so as to have everything clear for a double assault.

Night between 2d and 3d October.

This night was excessively wet, dark and tempestuous, and the working party mostly

separated to seek shelter, and all the engineers could effect, was to retire the wool-packs and other materials from No. 4 battery under cover from the fire of the place.

A working party of 200 infantry, with all the artillery men off duty, paraded to move the two servicable 18-pounders to battery No. 1, and to bring the disabled gun and carriages to the park. In consequence of the very heavy rain, the greatest difficulty was experienced in the movement; and all the infantry working party (with the exception of a detachment of the brigade of guards) having absented themselves, the two guns had not been dragged farther than the top of the hill in front of the left salient of the hornwork, when day-light put an end to the attempt (23).

3d October.

This morning the gallery of the mine only measured 74 feet, owing to the impediment of a large stone, which could not be removed, and the gallery had to pass over it.

In driving these galleries a great delay was occasioned after 45 feet, from the difficulty of keeping the candles burning; frequently the gallery was obliged to be cleared of workmen for half an hour to admit air. Under these unexpected delays, the assault of the outer line could not take place to-day.

The disabled 18-pounder and carriages were brought into the park, and the artificers were set to work to fit up a Portuguese block carriage to serve as a gun carriage, to mount on it the 18-pounder without a trunnion.

The only spare 18-pounder carriage was brought into use in place of one of the disabled carriages.

Night between 3d and 4th October.

In order to ensure the chamber of the mine being placed sufficiently at the back of the wall to form a good breach, officers were employed after dark, separately, to measure with a cord the distance from the mouth of the mine to the escarpe wall. This was effected without accident, and the measurement of each gave between 73 and 74 feet, whilst the interior measurement of the gallery gave 79 feet; it was therefore certain, even allowing for the gallery not being in the shortest line, that the miners had arrived under the wall, and to arrive behind it they were ordered to gain other four feet in length, making the total length 83 feet.

The two 18-pounders were moved during the night into battery No. 1, and a 24-pounder iron howitzer and French 6-pounder were taken back to the mouth of the trenches.

JOURNALS OF SIEGES

4th October.

At 9 A. M. No. 1 battery opened to clear the breach of the mine K practicable, the following ordnance:

18-pounder guns 2

24-pounder howitzers 3

In the first instance, the 18-pounder with a 2 lbs. of powder in the muzzle was only fired with 2 lbs. of powder, but after a few rounds it was increased to 4 lbs., and shortly afterwards to the service charge of 6 lbs.

The fire was kept up with precision and effect, and by 4 o'clock in the afternoon, the breach was perfectly practicable for its whole extent, about 60 feet. The expenditure was upwards of 100 rounds for each piece of ordnance: one howitzer carriage was disabled.

The expenditure of ammunition from the 1st October, including this day's firing, was as follows:—

	expended.	remaining.
24-pounder, round shot .	237	450
24-pounder, common shells	32	164
24-pounder, spherical case	40	184
18-pounder, round shot .	351	1314
6-pounder, ditto ditto .	—	86
18-pounder, spherical case	—	100

The French shot picked up, which could be made to suit the English calibres, are included in the above remainder.

Early this morning, the second gallery having been driven 83 feet, which, from actual measurement by a cord within the gallery, and on the surface of the ground above it, had been proved to be well beyond the back of the escarp wall, a return of four feet was made for a chamber, in which was deposited 1080 lbs. of powder in sand bags, leaving a space between the powder and the sides of the chamber of one foot. The gallery was then firmly tamped for a length of 12 feet next the chamber, the line of least resistance against the lower part of the escarp wall being about 8 feet.

ARRANGEMENTS FOR THE ASSAULT.

It was ordered that the mine should be sprung at 5 P.M., so that the assault might take place during day-light, and the working parties have the benefit of the dusk to commence, and the obscurity of the night to crown the breaches and complete the lodgment within the outer line.

The 24th regiment, under Captain Hedderwick, was selected to storm, and for that purpose were formed in the parallel at fifty yards from the mine to be exploded. An advanced party, under Lieutenant Holmes, was posted as close to the expected breach as was judged consistent with safety, having orders instantly on the ex-

plosion to rush up the ruins. Another party, under Lieutenant Fraser, was similarly posted in the nearest part of the trenches to breach K, and the remainder of the battalion was prepared to follow the advance as quickly as possible, and form wherever they could obtain cover.

A reserve of 500 men was brought into the trenches, and a considerable working party paraded in the suburbs of St. Pedro, with gabions, &c., to follow the storming party up the breach, and commence the lodgment.

SPRINGING OF SECOND MINE.—*Plate IX. Fig. 2.*

At the appointed moment the mine was sprung, and made an excellent breach *ab* 100 ft. in front, sending up into the air many of the garrison who happened to be posted just above it, but without occasioning the slightest accident amongst the troops of the besiegers posted closely around it.

The assault was conducted with the greatest regularity and spirit. In an instant the advanced party were on the ruins; and, before the dust created by the explosion had subsided, were in contact with the defenders on the summit of the breach. The party to assault the breach K were equally regular and equally successful; and, after a struggle of a few minutes, the gar-

rison were driven into their new covered way, and behind their palisades.

This gallant achievement, which overcame the greatest obstacle to the success of the siege, was effected with the loss of only 37 men killed, and 7 officers and 189 men wounded; amongst the latter was Lieutenant Colonel Jones, of the Engineers, who was charged with carrying into effect the arrangements for the assaults.

A great deal of musketry fire was maintained by the garrison from their upper lines during the assault; and, on its success, they fired as quickly as possible from all the ordnance of the place.

Night between 4th and 5th October.

During the night a lodgment was formed in front of the summit of the breach K, and a communication made to it; but owing to the confusion occasioned, by the working parties being ordered to their arms to support the storming parties, and the difficulty of separating them afterwards, only a small front was obtained. The same interruption caused the lodgment at the newly made breach to be less perfect than had been anticipated.

It was now arranged, with the view of making a flank attack at the moment of the

assault in front of the second line, and by such means rendering its success certain, and with a small loss of men, that No. 2 battery should be employed to breach the re-entering angle (F) where the wall of the first line meets the second line; and further, that howitzers from No. 1 should fire hot shot to try and burn the church of La Blanca. For this latter purpose, a furnace was ordered to be constructed to heat the shot.

In consequence, during the night two 18-pounders and one 24-pounder howitzer were removed to battery No. 2, and an additional 24-pounder howitzer was moved into No. 1, making the disposition of ordnance as follows.

No. 1,	. four 24-pounder howitzers
No. 2,	. { two 18-pounders, and one 24-pounder howitzer.

5th October.

This morning Lord Wellington deferred opening the batteries against the before-mentioned objects; but he desired the howitzers in No. 1 to open a fire, and try to break down the palisades in the ditch of the second line.

Battery No. 1 fired, therefore, to break the palisades, which was effected in some degree, and a few rounds to check the fire of the second line on the lodgments at the breaches.

The expenditure of ammunition was as follows :—

24-pounder round shot . . .	79
24-pounder spherical case . . .	21
24-pounder common shells . . .	9

During the day the working parties were employed, besides improving the lodgments on the breaches, in removing the fraises, and turning the parapet of the line carried last evening, into a parallel against the place, in making other openings through the exterior wall for communications, and in draining the trenches.

At 5 P.M. the garrison made a sortie with 300 voltigeurs from their covered way, which gained possession of the breach K with little loss, and maintained themselves there long enough to throw over the gabions, ruin the lodgment, and carry off the tools. They did not, however, gain possession of the breach M, nor of the parallel along the parapet to the left of the first breach K *n*. The loss of the besiegers from this sortie, exceeded 150 in killed and wounded.

Night of 5th October.

At dark workmen were employed to repair the damage done by the sortie, and flying saps were broken out from the parapet of the outer

line, at the points *n* and *n*, which it was proposed to connect about the shot piles *S*, so as to form a parallel along the glacis of the second line, to hold the garrison in check.

6th October.

About 11 o'clock this day the batteries opened as follows:—

The howitzers in No. 1 continued their fire against the palisades of the second line and the line itself; but succeeded in breaking very few of the palisades.

Battery No. 2 opened with two 18-pounders and a howitzer, to breach the wall in the re-entering angle *F*, where the outer line joins the second line, under the left corner of *La Blanca*.

The garrison returned a heavy fire from the Napoleon and four-gun batteries.

After No. 2 battery had fired for a short time, it was found that the soles of the embrasures were so high, that the pieces could not be sufficiently depressed to bear on the point intended to be breached; the battery, therefore, was obliged to cease firing for the day, and the embrasures were masked.

Ammunition expended.

24-pounder round shot . . .	73
24-pounder spherical case . . .	8
24-pounder common shells . . .	3
18-pounder round shot . . .	53

The garrison could not depress their guns sufficiently to bear upon the lodgment on the outer wall, but kept up a constant fire of musketry, and occasionally rolled large shells down the steep glacis. These in the night, when breaking ground, either carried away the gabion, or, lodging against it and bursting, blew it to pieces. Endeavours were made to advance the work at the full sap by the men of the line attached to the engineers; but, owing to their entire ignorance of the operation, and there being scarcely any fire of artillery to derange the efforts of the garrison against the approaches, no progress was made at this time, nor, indeed, during the remainder of the siege at the full sap.

The approaches towards the second line were pushed this evening within 30 yards of the covered way.

7th October.

The fire of the howitzers in No. 1 being found too uncertain to keep in check the fire of the second line, and the approaches to that line being so close as to render it dangerous for the battery to fire shells, two of the howitzers were drawn back, and were replaced in No. 1, by an 8-pounder and 4-pounder French of the ordnance taken in the hornwork. There was an ample proportion of French shot for their

supply, and these pieces proved of good service.

The breaching battery No. 2 opened again this morning, and its fire was kept up with such good effect, that by 5 o'clock in the evening a considerable impression had been made on the wall (F), and 40 or 50 feet of the parapet had been beaten down. The castle kept up a very brisk fire in return, and one of the 18-pounders was disabled by having a trunnion knocked off.

Ammunition expended.

24-pounder round shot . . .	67
24-pounder spherical . . .	19
18-pounder round shot . . .	230
8-pounder ditto ditto . . .	48
4-pounder ditto ditto . . .	43

Night between 7th and 8th October.

This night the 18-pounder disabled on the 1st inst. was brought into No. 3, mounted on a block carriage, and a second block carriage having been hastily prepared, it was also brought into the battery, and the gun that lost a trunnion on the 7th, was mounted upon it.

The rains now became exceedingly heavy, and much time was daily occupied in draining the trenches, and keeping the communications practicable up the steep banks and breaches.

A third sap (*s*) was attempted along the glacis, in the direction of the gate of the

second line, and the workmen were put as usual to prolong the heads of the other saps, but the night was so extremely inclement, they made but little progress at either.

8th October.

At 2 A. M. the garrison made a sortie from their covered way with 400 men, which force in an instant pushed over the advanced covering party, and falling unexpectedly on the guard and workmen in the parallel on the summit of the outer line, drove them down the wall. The guard and workmen, however, being re-formed, they charged up the approach, and forced the assailants back into their covered way, but not before they had levelled all the work and carried off the tools.

In this sortie the commanding officer in the trenches, Lieutenant Colonel the Honourable W. Cocks, an officer highly distinguished for zeal and intrepidity, fell, and above 200 men and officers were either killed or wounded.

After this severe loss, any further efforts to push the works between the outer and second line, was forbidden.

The parallel was extended to its left, to embrace the whole extent of the front attacked.

The breaching battery No. 2, continued its fire this day with such good effect, that by the

evening the breach F was practicable on a front apparently from 20 to 25 feet.

Very great difficulty was found in pointing correctly the guns on block carriages; once or twice the guns dismounted themselves when fired with the full charge, and it became necessary to use them with very reduced charges, which greatly diminished their effect.

Captain Power was slightly wounded this morning.

No. 1 battery continued its fire, to keep that of the castle in check.

Ammunition expended.

24-pounder round	30
24-pounder spherical	20
24-pounder common shells	15
18-pounder round	310
8-pounder ditto	39
4-pounder ditto	50

At night a communication (*v v v*) in zigzags was carried to the left, along the ditch of the lower line, to the tambour of strong palisades, constructed at the salient angle to flank the ditch. These palisades were now cut through, in order to turn those of the ditch of the breach (F), and a trench (*v v*) was formed to bring a musketry fire on that breach, and prevent its being cleared.

9th October.

Orders were given to discontinue the fire on the breach, as the excessive expenditure of small arm ammunition by the guard of the trenches in supplying the deficiency of artillery fire, had reduced the quantity as low as could be consistent with the situation of the army in presence of an enemy; and, therefore, no assault could be given till a further supply could be obtained from the rear. (24)

Waiting the arrival of the small arm ammunition, the artillery were desired to try to burn the church of La Blanca with hot shot.

Temporary grates had previously been completed in both batteries, and a fire with hot shot was kept up this day from the 18-pounders and howitzers, but without the desired effect; for, though the roof of the building frequently smoked a great deal, it would never break out into a blaze.

Lieutenant Pereira, of the Portuguese artillery, was killed this day.

The miners commenced a gallery from the nearest houses towards the church of St. Roman, which the garrison maintained as a post, and in which they kept stores; it was understood to be ready mined for destruction if necessary.

The garrison attempted in the night to work at the new breach (F), but were several times driven in by the judicious conduct of a party under Ensign Buckeridge, of the Coldstream guards, posted in the trench *w v*, who, unfortunately, was killed in performing this service.

10th October.

The fire of hot shot was continued this day against the church of La Blanca without the desired effect, chiefly owing to the difficulty of heating the shot in sufficient numbers to keep up a vigorous discharge; for the shot fixed, evidently, in the building, and produced frequent signs of serious combustion, but which the garrison found time to extinguish, or keep under, between each discharge.*

In the evening there only remained about forty-two rounds of 24-pounder shot. The 18-pounder ammunition, also, would now have been very low, had it not been for the French shot, 16-pounders, collected, 426 in number, and 34 English shot dug out of breach K.

* Would it not be desirable, under similar circumstances, to maintain a discharge of cold shot with the heated shot? From such a mixed fire, many dangerous hot shot might escape observation till too late, or at least the constant fire and consequent danger from exposure, would take from the enemy's coolness whilst searching for and removing the hot shot.

Ammunition expended the last two days.

24-pounder round	179
18-pounder ditto	150
8-pounder ditto	60
4-pounder ditto	41

A supply of 40 barrels of powder was received this day from St. Andero.

The garrison were getting forward with preparations for a vigorous defence of their works. They had, or pretended to have, fougasses under the south end of the church of La Blanca; two saucissons were very apparent up the walls, and large shells were ranged along the parapets. They also cut off the new breach from the right of their works by a row of strong palisades, extending from the second to the third line.

During this and the succeeding days no new work was undertaken; but there was much employment in draining, and keeping up the batteries and communications.

11th October.

The fire of hot shot against La Blanca was renewed this morning from the 18-pounders, but without better success; and after firing about 50 rounds, the battery ceased, and no further attempt was made.

At night the 18-pounders and howitzers were taken out of No. 2 and drawn back to the gate

of the hornwork, to secure them from the fire of the castle.

The distance of the terrace in front of the church of St. Roman, from the house where the gallery was commenced, was found by measurement this night to be upwards of 50 yards, which was much more than expected, but the soil working extremely easy, the gallery was continued.

12th October.

The weather was very bad, with violent rains.

The gallery towards St. Roman, measured in the morning 27, and in the evening 34 yards.

The only fire of artillery to-day, was a few rounds from a field piece in No. 1.

13th October.

During the cessation of artillery fire, the garrison, notwithstanding every endeavour on the part of the guard of the trenches to prevent them, had contrived to clear away about eight feet of the top of the breach (F), and had formed a small trench at the back of the rubbish, which enabled them this morning to work under cover.

The only fire of artillery this day was again

confined to a few rounds from a field piece in No. 1.

Night between 13th and 14th Oct.

It being now determined to try and bring down the wall of the keep, on which the Napoleon battery stood, the embrasures of No. 2 were opened to bear on it. The badness of the night, however, prevented the guns being run in.

14th October.

There was no fire of artillery this day, but at night No. 2 battery was armed as follows, to open on the keep of the castle.

18-pounder, on travelling carriage . . .	1
18-pounders, having each lost a trunnion, on block carriages	2
24-pounder howitzer, on a travelling carriage	1

15th October.

No. 2 battery opened upon the keep of the castle this morning, to try and breach the wall; but Napoleon and the four-gun battery, with two mortars in the second line, returned such a fire, that they ruined the merlons, and silenced the battery, after three-quarters of an hour's firing. The guns were not damaged, but a

wheel of the 18-pounder carriage, and another of a block-carriage, were broken.

In consequence of this, Lord Wellington ordered battery No. 2 to be again altered, to bear on the breach F.

A large quantity of French 6-inch shells having been collected, (326 in number,) a French 6-inch howitzer, taken in the hornwork, was put into No. 1 battery last night, and it opened its fire this morning, in conjunction with two 24-pounder howitzers, against the rampart of the second line with shells, having long fuzes, to try and ruin the parapet, and make the bank more practicable at a point where the palisades had been broken by our previous fire. The practice from the howitzers **was good, and considerable effect was made on the bank of the rampart.**

Indeed, the earth escarp of the second line under La Blanca, was so much injured by the little firing that had been directed against it, that if the supply of ammunition would have admitted of a further expenditure, a perfect and extensive practicable breach would readily have been made in it.

Ammunition expended.

18-pounder round	30
6-inch shells	60
24-pounder do.	50

This day 300 rounds of 18-pounder ammunition was received from Ciudad Rodrigo, and a supply of small-arm ammunition from the rear depôts.

16th October.

It was intended to have opened No. 2 battery again upon breach F this morning, but the rain last night was so heavy, as to ruin the sand-bag revetements, the greatest part of which fell down, both in No. 1 and No. 2. All offensive operations with artillery being suspended for this day, some alterations were made in the block carriages to facilitate pointing, and to enable the guns to be depressed with greater certainty.

At the extremity of the sap (*s*), which was near the point where the palisades, which the French planted on the night of the 26th September, joined their covered-way, an attempt had been made to construct a cavalier-de-tranchée, but the workmen had not skill enough to effect it. This evening, the garrison commenced a cavalier within the angle, to drive the guard out of the sap.

The gallery towards the church of St. Roman, was 35 yards long early in the morning, and the miners reported, that the garrison were working against them. On examination,

however, that did not appear to be the case, but the French were heard quite distinctly talking in the church ; for fear, therefore, that they should hear the miners at work, the gallery was only carried a few feet farther, when a return was made for a chamber, which was loaded with 900 pounds of powder, and left till orders should be given to explode it. Two miners were left constantly in the gallery to watch if the garrison should attempt to work to it, in which case it was to be immediately exploded.

In driving this last gallery, though so much longer than the former galleries, little or no difficulty was experienced for want of air, which was attributed to not being more than six feet under the surface of the ground.

The violent rains having brought down all the sand-bag revêtements, working parties were employed throughout the night to replace them with gabions.

17th October.

The batteries being put into complete order, they resumed their fire this morning as follows:

Battery No. 1, with one French and one English howitzer, to damage the second line with shells, which it did with effect.

Battery No. 2, with three 18-pounders and

a 24-pounder howitzer, as before, against the breach F, to render it again practicable,* where it had been scarped by the garrison. This was effected by half-past three in the afternoon, but Lord Wellington, not deeming the ascent sufficiently easy, ordered another day's firing previously to giving the assault.

The fire of the castle was very brisk at intervals, from the four-gun battery and two mortars, but the ordnance sustained no damage from it. The axletree of the howitzer carriage in No. 2, however, broke by its own fire, and was replaced by one of the serviceable howitzer carriages.

Ammunition expended this day.

24-pr. round . . .	42	} Being all that was left.
24-pr. common shells .	46	
24-pr. spherical . . .	30	
18-pr. round . . .	350	
6-inch shells . . .	70	

In the course of this day, the garrison killed nine men in the sap, from the little cavalier they had just raised.

At 7 P. M. a small mine or fougass, of two barrels of powder, was sprung, from the extremity of the sap (s), to make a breach in the

* The lame guns only fired with a charge of two pounds.

angle of the enemy's palisades and cavalier. The effect of the explosion reached the angle, but did not make the opening desired. The garrison, nevertheless, instantly abandoned that part of the work, and an attempt was made to form a lodgment, connected with the sap, to keep them out. The French, however, returned in about half an hour in force, and as there was no authority to be obstinate in maintaining the recent acquisition, it was abandoned.

18th October.

Notwithstanding, a continued musketry fire kept up during the night from the trenches, the garrison contrived to put a parapet of sand-bags on the breach F, and also to place a **chevaux-de-frise** on the parapet to its right.

At 9 o'clock the batteries recommenced their fire as follows.

No. 1 battery, with one French and one English howitzer, to annoy the garrison with shells and spherical case; and the two field pieces to keep up a brisk general fire.

No. 2, with three 18-pounders as before, and one 24-pounder howitzer, firing 18-pounder shot, to render the breach F perfectly practicable, and demolish all obstacles to the assault.

The fire was first directed to beat down the

sand-bag parapet, and improve the slope of the breach, which was fully effected by 12 o'clock. The fire was then turned to destroy the chevaux-de-frise on the right of the breach, which was accomplished in a few rounds, and the good gun was afterwards pointed against the fraises of the third line, whilst the fire of the defective guns and howitzers, continued to improve the breach till half-past four, at which time the fraises were partly beat away, and the rampart in a certain degree breached, by the shot that had gone over breach F.

The garrison returned a very brisk fire of shot and shells at intervals. One of their shells blew up all the cartridges in the battery, from 12 to 15 in number, but without materially hurting any man. A howitzer wheel was shot away, but it was immediately replaced.

The expenditure of ammunition this day was as follows :

18-pounder round shot	330
24-pounder common shells	36
24-pounder spherical	32
6-inch shells	62

The Marquis of Wellington, having minutely examined the breaches, and the injury done to the defences, judged them in a state to be assaulted, and issued the following Memorandum.

ARRANGEMENTS FOR STORMING SECOND LINE.

No. 1.—The enemy's second line is to be attacked this afternoon at half-past 4 o'clock.

No. 2.—The mine under the church of San Roman is to be exploded at that hour, and Lieutenant Colonel Brown will immediately order an officer and 20 men of the troops under his command to rush forward and establish themselves on the breach which the mine will have made: an officer and 50 men will be in readiness to support these.

No. 3.—Colonel Brown will have the effects of the mine well reconnoitred, and if he should find that it is practicable to enter the second line, after his troops will have been established on the emplacement of the church, he will order them to do so, and establish themselves in the second line, communicating by his left with the troops which will attack the second lines from the piles of shot.

No. 4.—If Colonel Brown should find that he cannot enter the second line, he will keep a fire on it from the emplacement of the church.

No. 5.—Six ladders of 18 feet length must be sent to Colonel Brown.

No. 6.—The troops of the 6th division cantoned in Burgos, must be under arms to support the attack upon the second line, if it should be necessary.

No. 7.—When the mine will explode at half-past 4, a colour will be displayed on the hill to the west of the castle, which is to be the signal for the attack on the other parts of the line. At 4 o'clock the parallel along the parapet of the first line must be fully occupied.

No. 8.—When the signal will be made, an officer and 20 men, who must previously be placed in the sap leading to the palisades in front of the gate of the second line, are to rush forward and drive the enemy from behind that palisade, and follow them into the covered way.

No. 9.—The sap must be immediately re-occupied by an officer and 30 men, who are to protect the rear and right flank of the detachment which will have entered the covered way.

No. 10.—At the same time an officer and 40 men, 18 of them carrying ladders, must rush forward from the left breach in the first line, to the shot piles, and thence to the line in front of the shot piles; where they will descend into the ditch, which they will pass at the places where the palisades have been destroyed by shot; they are then to scale the line at that point.

No. 11.—An officer and 50 men are to be in readiness at the trench in the first line, to rush forward to the shot piles as soon as the first party, which will have gone there, will have advanced from thence; these troops are to support the storming party, and are to move on from the cover of the shot piles as soon as they will find the head of the storming party established on the parapet of the second line. These men are to carry with them 3 ladders.

No. 12.—50 men must be in readiness to move up to the shot piles, as soon as the 50 ordered in paragraph 11 will have moved forward to the escalade. These are likewise to carry 3 ladders.

No. 13.—As soon as the party will have succeeded in the escalade, they are to turn to their left, and commu-

nicate with those who will storm the breach in the second line.

No. 14.—As soon as the party will have escalated the line, the 30 men ordered into the sap are to endeavour to force the gate of the second line ; and if they should succeed, to communicate by their left with the party which will escalate.

No. 15.—350 men of the relief for the trenches this evening, must go down under the command of a field officer, so as to be in the trenches at 3 in the afternoon. As soon as they arrive, the whole of the covering party now in the trenches which will be on the left are to go down to the right, and the left of the trenches and hornwork will be occupied by the relieving party.

No. 16.—When the signal will be made that the mine is sprung, an officer and 20 men are to rush forward from the advanced trench to storm the breach.

No. 17.—50 men are to be in readiness to follow these, and are to move out as soon as the head of the first detachment will have ascended the breach.

No. 18.—100 men are to be in readiness in the advanced trench to support the storming party in the breach ; but they are not to leave the trench till the storming party will be established in the breach ; and then only in case support should be wanted.

No. 19.—When the storming party will enter the breach, they must turn along the parapet to the left, and drive the enemy from the stockade which is there established.

No. 20.—The troops formed in the parallel along the parapet of the first line, and in the trenches under the hornwork, must keep up a fire, during the storm, on

the enemy's third line and the castle, so as to keep down the fire of the enemy.*

A working party was prepared to make a lodgment on the parapet of the second line, to destroy the palisading, effectually breach the escarpe, and make communications from the outer line.

EXECUTION OF THE ASSAULT.

At the appointed hour of half-past four P.M., the party of 200 men of the King's German Legion, under Major Wurmb, advanced in a most gallant style, and carried the breach (F) with very trifling loss. Some of the men even pushed into the third or upper line; but, being immediately attacked by very superior numbers, the assailants were in a few minutes driven back through the breach, with the loss of Major Wurmb, and most of their other officers killed or wounded.

Under these circumstances, they could not attack and drive the garrison from the palisades on the left of the breach, as ordered by memorandum No. 19, but the whole joined the assailants on their right.

* The several arrangements for assaulting or escalading, inserted in these journals, were mostly written by the Duke of Wellington on the ground, after looking at the breach or point to be escaladed; and usually, as one side of a bit of paper was filled, it was handed to his secretary, Lord Fitz-Roy Somerset, or other staff officer, to be copied, and was immediately distributed.

The party of 200 men of the guards advanced in an equally gallant style with ladders through the breach K, to the part of the second line opposite the shot piles, where the palisades in the ditch had been beaten down by the fire of the batteries, and readily gained the summit of the parapet. In this position they formed, opposed by a fire of musketry from a strong body of troops, which assembled on the terre-plein of the second line. After about ten minutes sharp firing, another body of the garrison joined the defenders from their left, when the whole defensive force advanced in overpowering numbers, and drove the assailants completely back from the line.

Both detachments conducted themselves with the utmost order and gallantry, and failed merely from the inferiority of their numbers. When the French turned out, their works appeared quite swarming with men (25).

The mine under the church of St. Roman made a large breach in the terrace in front, but did little injury to the church itself. On its explosion, however, and the advance of the Portuguese and Spainards, the garrison abandoned it, and exploded their own mines, which destroyed great part of the church, and the besiegers lodged themselves in the ruins.

This attack of the second line having failed, nothing was done in the night but carrying a

communication to the ruins of the church of St. Roman. Indeed, it is probable, the determination was now formed to raise the siege, although an officer (Lieutenant Robe) was detached with twenty pairs of Portuguese artillery mules, and twenty pairs of bullocks, to bring forward two 24-pounder guns from Reynosa, which had been sent there by the navy from St. Andero.

19th October.

Notwithstanding the musketry fire during the night, the garrison succeeded in putting a sand-bag parapet upon the breach; and this morning they made a sortie upon St. Roman, in which there was a small guard, and obtained possession of it for a short time before they were driven back.

20th October.

The troops had been for some time by degrees drawn to the front, in consequence of the movements of the French army for the relief of the castle, and this morning Lord Wellington and Staff, having finally moved to the front to direct the operations of the covering force, Brigadier General Pack was left in command before the place, with between 2 and 3,000 men only.

In the evening the picket was again driven out of the church of St. Roman, but the post was recovered before morning.

The artillery received an order early this morning, to withdraw all the guns and stores from the batteries, leaving only a French howitzer and gun in No. 1, to fire a shot occasionally.

The stores were got out of the batteries immediately, and the guns were removed to the park during the night.

21st October.

An order was received this evening from Lord Wellington, immediately to destroy such part of the train as could not be carried off, and for the troops to raise the siege next morning at 5 A. M., as he intended to retire at that time with the covering force.

In consequence of these orders, the artillery disabled and buried the French guns, burnt their carriages and other incumbrances, and, about 11 o'clock at night, commenced their retreat with the 18-pounders and howitzers and the remaining ammunition.

Finding, however, from the badness of the roads and weak state of the bullocks, that they could not get on with the three 18-pounders, they knocked all their trunnions off, demolished their carriages, and left them on the road; after which, they continued their march to headquarters at Frandovauze, with the five howitzers and a French 4-pounder, which they reached

early in the morning, and at 9 o'clock, marched again for Celada-del-Camino.

22d October.

The troops drew off at the appointed hour without molestation. Some mines of destruction, which had been prepared in the hornwork of St. Michael, were to have been fired the last thing, and 20 barrels of powder, which had just arrived from St. Andero, were ordered up for that purpose, but they were, unfortunately, taken to a wrong place, and the mines could not be exploded.

Casualties.

The total loss at this siege was 24 officers and 485 men killed, 68 officers and 1487 men wounded and missing.

That of the artillery was as follows :—

		wounded.		total.
		severely	slightly	
Non-commissioned officers and privates, Royal Artillery.	killed.			
		12	14	17
				43
Non-commissioned officers and privates Portuguese Artillery.				
		3	5	7
				15
Total		15	19	24
		58		

Officers.

Killed, Lieutenant Pereira, Portuguese Art.

Slightly wounded { Captain Power
Captain Dansey } Royal Art.
Lieut. Elgee

The following shows the exact state of the ammunition brought to the siege, and obtained during its progress, with the quantity expended of each nature.

	24-pr. Round shot.	18-pr. Round shot.	24-pr. Cannon shells	24-pr. Spherical shells	18-pr. Spherical shells	French 6-inch shells.	French 8-pr. shot.	French 6-pr. shot.	French 4-pr. shot.
Ammunition brought to the siege.	900	1,306	208	236	100	..	..	..	..
French shot and shells brought in by the soldiers, and paid for during the siege	..	*426	..	..	..	326	1,166	176	817
English shot dug out of the breach K, or found near it	20	34	..	8	..	..	..	..	..
Arrived from Ciudad Rodrigo, October 15th	..	300	..	..	..	..	..	..	..
Total	920	2,066	208	244	100	326	1,166	176	817
Expended	920	1,854	203	182	..	192	353	90	288
Remained after the assault of the 18th	..	212	5	62	100	134	833	86	529

* French 16-pra.

It is a pleasing act of justice to the artillery officers employed in this attack, to state, that they vied with each other in their exertions and expedients to meet the hourly difficulties they encountered, and that no set of men could possibly have drawn more service than they did from the limited means at their command.

Disbursements.

Money expended during this attack for the engineers' service.

	£	s.	d.
For candles for the mines, tracing lines, cloth for saucissons, saws, chissels, and gimblets, &c. for the carpenters	37	9	0
Large gabions paid at 1s. each; smaller do. paid at 8d. each; fascines paid at 6d. each	226	0	0
Pay of officers acting as engineers, at 10s. per day each	152	10	0
Working pay of royal military artificers	15	10	0
Working pay of artificers from the line	142	10	8
Working pay of miners from the line	131	15	0
Paid for task work, in driving galleries, in addition to the regular daily pay of the miners	152	15	6
Woolpacks taken from a Spanish store in the town, to aid in carrying forward the trenches, were paid for	2025	0	0
Total Expense	2883	10	2

Of French and English entrenching tools there were expended altogether above 2,000.

OBSERVATIONS.

The castle of Burgos, although sufficiently and even skilfully fortified to defy the utmost efforts of a corps of guerrillas, or an ill-equipped regular corps of Spaniards, could only rank as a very insignificant fortress, when opposed to the efforts of a good army: therefore, its having made so long a defence, and its successful resistance having produced serious ill consequences to the allies, the operations against it have been canvassed with more than ordinary interest, and the merits of the attack have been severely arraigned.

That the artillery brought against the castle (three 18-pounder guns, and five iron howitzers) (26) were totally inadequate to any regular operation, is universally admitted—an admission nearly implying a necessity for failure, and one which will be viewed by every professional man, as a sufficient apology for any miscarriage or ill success in the prosecution of the plan of attack. There were, however, some officers who thought those means not judiciously applied. Other modes and other points of attack were suggested, and even submitted to

Lord Wellington; but they were all found to be the visionary schemes of men unacquainted with the details—beautiful as a whole, but falling to pieces on the slightest touch. His Lordship condescended to receive the projects offered, analysed them, saw their fallacy, and rejected them; which, as marking his approval of the attack adopted over every other plan that could be suggested, must be conclusive as to its superior merits under the peculiar circumstances of the case, and renders unnecessary any further observations upon it. It, therefore, only remains to show from what causes that attack, as an engineer operation, failed.

In all the former sieges, almost every misfortune during their progress has been readily traced, next to the smallness of the means with which they were undertaken, to the defective state of the siege establishments of the army, which were seldom equal to draw the full benefit from even the small supplies that were brought up. But on this occasion even such as those did not exist: there was not the semblance of an establishment of that nature; not even a half-instructed miner, or half-instructed sapper—barely an artificer—hence the deviations from the original project, and the delay in the execution of such parts of it as were fol-

lowed, which, combined with accident, served to render the project unavailing.

To make this apparent, it is only necessary to point out those deviations and delays.

The first deviation arose from the want of an establishment of miners with the instruments of their art, which, giving just cause to doubt the capability of the engineers to mine under the outer enceinte, led to the assault of the outer wall without a breach, on the night of the 22d September. The repulse on that occasion dispirited the besiegers, whilst it, in the same degree, raised the confidence of the garrison; and as the original project, of working up to the wall, was afterwards carried into effect, two days were lost by it.

Some miners selected from the troops at the moment, without other instruments than the common pick and shovel, were then set to work, to form a gallery under the wall; but from its being their first attempt at military mining, they were 108 hours piercing through 60 feet; their inexperience thus causing a delay of 36 hours beyond the time practised workmen would have required to complete it. On the night of the 29th September the mine was sprung, and formed a breach which might have been assaulted with every probability of suc-

cess. The accident of the storming party on that occasion having been led to a wrong spot occasioned a loss to the besiegers of five days, (the additional time occupied in preparing the second mine,) and the expenditure of a considerable quantity of ammunition to keep the breach practicable. It also led to the fatal measure of putting the guns into batteries close under the walls, where one of the three was disabled.

At and after the assault of the breach made by the mine on the 4th October, the proposed fire on the second line was diminished almost to nothing, in consequence of the expenditure on the first breach, which, added to the extreme ignorance of the workmen in sapping, caused the lodgment to be very imperfect, and a further advance by sap impracticable. Indeed, from these causes, the work within the outer wall was neither sufficiently extensive nor sufficiently supported, and the garrison profited by it to make their two successful sorties. The state of things after those efforts became very awkward: the artillery, which was never able to make head against the fire of the place, had been still more reduced: the engineers, for want of the necessary assistance, were unable to advance the trenches, and the

rison were hourly destroying the troops, without being molested themselves.

to storm the second line had now been decided, it would probably have succeeded; how determine on such an advance, when the existing lodgments were not secure? The feelings of the two parties had undergone a complete change. Repeated failure had rendered the British cautious, whilst instant success had rendered the enemy confident. A measure of further surety, good in itself, though perhaps not absolutely necessary, was now adopted, to breach an exposed part of the second line through the ditch of a flank, directed on the hill of St. Michael. This was effected in an unexpectedly short period, and

the assault should have been immediately given, whilst the impression of a new danger was fresh on the minds of the garrison, and before precautions could be adopted to render the danger less: but that was found to be impossible, in consequence of the excessive expenditure of musket ammunition by the guard of the trenches in supplying the deficiency of artillery fire.

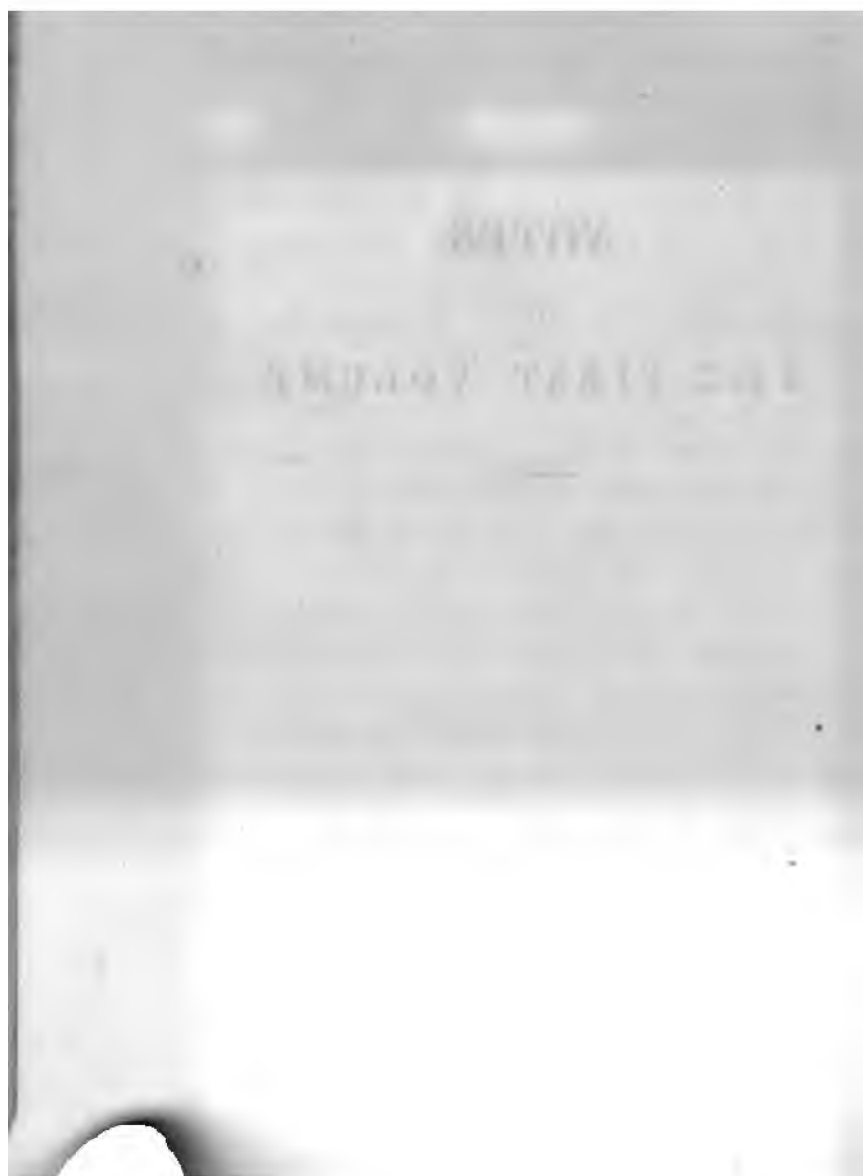
During the delay of waiting for small-arm ammunition the garrison cleared the breach, and did much to improve their defences; and

No. 2 battery having, contrary to the original intention, opened on the keep of the castle, whilst the French were still in possession of their lower works, they concentrated all the artillery of the front upon that battery, speedily silenced it, and disabled two carriages.

The besiegers, being thus deprived of nearly all their instruments of attack, hastened, as soon as a supply of musket ammunition arrived, to render the breach in the second line again practicable, and to give the assault. The breach was instantly carried, and the earthen lines were found so much damaged and of so weak a profile, that the troops were quickly over them—some men and officers even gaining the upper enceinte, and nothing prevented the assailants from retaining possession of the second line, but being attacked by superior numbers before they could receive support. Considering, therefore, how much was effected without scarcely any engineers' means, it may fairly be concluded that, had there been a siege establishment with the army, even moderately efficient, so as to have admitted of the successful performance of the rudiments of the art, the proposed attack, even with the inadequate support of artillery it received, would have been carried through, and Burgos have fallen under it in ten days. (27)



NOTES
TO
THE FIRST VOLUME.



CONTENTS OF NOTES.

- No.
- 1.—ESTABLISHMENT of the Engineer's Department in the Peninsula at the Commencement of these Sieges.
 - 2.—Detail of the Arrangements for Supply of Tools, Materials and Stores, for the Attack of Badajos in May, 1811.
 - 3.—Heavy Artillery ordered from Lisbon to Elvas, to replace Guns taken for the Siege of Badajos.
 - 4.—Cause of the Battery for breaching the Castle Wall at Badajos, being so distant from the object.
 - 5.—Observations on the Ordnance used at the Siege of Badajos in May and June, 1811.
 - 6.—Comparison of the Attack of the Castle of Badajos with that of the Castle of Nice in 1705.
 - 7.—Destruction of the Works of Almeida by the French, and temporary Repair by the British in 1810.
 - 8.—Detail of the Movements of the Battering Train and Siege Stores, from Oporto to Almeida, for the attack of Ciudad Rodrigo.
 - 9.—Details respecting the Bridge on Tressels, put down on the Agueda at Marialva, for the passage of the Heavy Artillery.
 - 10.—Observations on the short period of the Investment of Ciudad Rodrigo.
 - 11.—On the expediency of attaching some explosive machine to Light Balls.
 - 12.—Observations on the Time employed to throw up the Batteries at Ciudad Rodrigo.
 - 13.—List of Tools and Stores forwarded from Lisbon for attack of Badajos in March, 1812.

CONTENTS OF NOTES.

- Arrangements and movements of the Battering Ordnance, and Siege Stores, for the same Siege.
- Observations on the attack proposed for reducing Badajos in March, 1812.
- Necessity for investing a besieged place on every side.
- Observations on making Breaches from distant batteries.
- Details of an effort made secretly to blow down the batardeau of the ditch of the lunette of St. Roque.
- Artillery and Engineer Arrangements for aiding the Assault of the Breaches and Escalades at the Capture of Badajos.
- Considerations on General Picton's successful Escalade of the Castle of Badajos.
- Nature of Ladders used at the Escalades in Spain.
- Selections from the Order-Book of the Garrison of Badajos during the Siege, to elucidate particular transactions.
- General Order of the army respecting the Working Parties at the Attack of Burgos.

- 24.—Observations on the Fire of the Guard of the Trenches.**
 - 25.—Observations on different Modes of assaulting Breaches practised at these sieges.**
 - 26.—Observations on the utter Inefficiency of the 5½ inch, or 24-pounder, Iron Howitzer, as a piece of Siege Ordnance.**
 - 27.—Part 1.—Considerations on the Disadvantages attending the siege of a place situated on a height.**
Part 2.—Considerations on the Disadvantages accruing to a place from being under the command of neighbouring heights.
-

NOTE 1.

At the period of commencing the preparations for these Sieges, the establishment of the engineer's department in the Peninsula was as underneath.

Engineers.				R. M. Artificers.			Field Train.			Public Animals.		
Lt. Colonel.	Captains.	Lieutenants.	Draftsman.	Serjeants.	Corporals.	Privates.	Ass. Commissary.	Clerks.	Conductors.	Horses.	Mules.	Carts.
1	10	12	1	3	3	13	1	1	1	..	6	..

To account for the extreme insufficiency of the above establishment, it may be observed, that, from the termination of the war of the Succession till the war of the French Revolution, England never put forth her strength as a great military power; but, happy in her insular situation, and confident in her naval supremacy, so utterly neglected her army, that, on the commencement of hostilities in 1793, her infantry, cavalry, and field artillery, were defective in almost every branch of their organization.

The first operations of the war made the defects of those arms apparent; and, from that moment, neither expense nor trouble were spared to improve their composition, equipment, drill, discipline and tactics, till they each attained a very high degree of perfection. Unluckily, however, for the engineers' branch, the only great siege in which the British were employed was carried on by the Austrian siege establishment, which prevented the deficiencies of that arm becoming evident except to the engineers themselves. Many were the representations made at different times by various officers,

NOTE 1.

the necessity for an improved organization of the
and the instruction of the officers and men in
es, but in vain; and in 1811 the siege establish-
ent of the empire were as imperfect and as uninstructed
in 1793.

NOTE 2.

*The following is the Detail of the Engineers' Supplies
for this Siege.*

On the 5th March, the French army under Marshal
assena commenced its retreat out of Portugal. At
t moment Badajos was in a condition to have resisted
relieved, and a corps under Lord Beresford was
detached to the Alemtejo for that purpose; whilst the
Duke of Wellington in person commenced the pursuit
of the retiring force, with his views directed to the reco-
very of Almeida and Ciudad Rodrigo.

The commanding engineer, Lieutenant Colonel
Fletcher, and three officers, accompanied head-quarters,
and Captain Squire, the Alemtejo division; all the other
officers being left in charge of the works still going for-
ward for strengthening the lines and Almada position.

15th March.

Head-quarters being at Losoa, orders were sent to
Lisbon for a proportion of entrenching tools to be for-
warded to Coimbra, and remain there in depôt in readi-
ness for the attack of Almeida.

22d March.

A detachment of 59 rank and file of the corps of royal military artificers disembarked at Lisbon. On their landing, as had been previously arranged, one half was told off for the duty of the lines, and the other half marched to the head-quarters of the army, under Captain Ross and Lieutenant Stanway.

31st March.

In consequence of orders from Lord Wellington, Lieutenant Miniecke was detached from the head-quarters at Celorico to Elvas, by the route of Miranda de Corvo, Condeixa, Pombal, Leiria, Thomar and Abrantes, with instructions to turn the detachment under Captain Ross, wherever he might meet them, to Elvas.

6th April.

Lord Wellington, having driven the French out of Portugal in a most disorganized state, and having his head-quarters at Villa Mayor on the Coa, directed Colonel Fletcher to draw out a proportion of stores to be forwarded from Lisbon to Elvas, for the purpose of laying siege to Badajos, and, having approved of the list, issued the following memoranda.

Memorandum for Colonel Fletcher and the Commissary General, 10th April, 1811.

1.—Colonel Fletcher is to give directions that the tools, of which he has given me a list, shall be sent by sea to Setuval; I will write to the Admiral on the subject.

2.—He will make a requisition on the Commissary General for boats at Setuval, to remove the articles from thence to Alcacer do Sal, and for carriages to remove them from Alcacer do Sal to Elvas.

3.—The Commissary General will take measures to supply these boats and carriages.

4.—Colonel Fletcher will give directions that Marshal Sir W. Beresford may be apprized at what time the articles will arrive at Setuval, Alcacer do Sal, and Elvas, respectively.

5.—The marshal is directed to provide an escort for them, but they must not wait for the escort, unless there should be an appearance of danger from their moving without.

Proportion of Engineers' Stores approved for the Attack of Badajos.

Gun platforms	40
Mortar do.	15
Four-fifths of the number of screws and wrenches sent from England	$\frac{4}{5}$
Shovels	1,200
Spare helves	200
Pick-axes	1,200
Spare helves	1,200
Spades	300
do. helves	50
Earth rammers	50
Miners' picks	200
Spare helves	50
Sand bags, bushel	80,000
Carpenters' tools, chest	1
Miners' tools, do.	1
Smiths' tools, do.	1
Ballast baskets	100
Tarpaulings, large	30
do. small	10
Iron crows, 5 feet 6 inches . . .	20
Inch plank, superficial feet . .	300
Claw-hammers	40
Broad-axes	30

Felling-axes	12
Saws, hand	20
do. pit	3
do. crosscut	2
Adzes	20
Hinges, pairs	24
Hambro' line, skeins	50
Chalk, a small quantity.	
Forge cart, with harness, &c. &c.	
&c. complete	1
Rope, tarred, 3 inch, coils	2
do. do. 2½ do.	2
do. white, 1 do.	2
Hand-crow levers	4
Spun yarn, coils	30
Masons' levels	6
Bobs and lines for do.	12
Theodolites, 5 inch	2
Sextants	2
Compasses with sights	2
Measuring chains	3
Banderols	6
Spikes, 7 inch	1,000
do. 6 inch	500
Nails, 40 penny	1,000
do. 10 do.	1,000
do. 6 do.	5,000
Miners' jumpers	20
do. borers, of sorts	20
do. gads	15
do. hammers	12
Wheelbarrows	20
Measuring tapes	4
Lanthorns, dark	12
do. Muscovy	8
Scaling ladders, joints	24
Sledge hammers	4
Hand bills	200
Fascine choakers	40
Hand-barrows	20
Steel blister, cwts.	1
Coals, chaldrons	½

Candles, lbs.	20
Barrels of chevaux-de-frise, with spears	30
Box rulers	12
Gimblets, spike	12
do. common, of sorts	20
Padlocks and hasps, small	20
do. large	10
Tallow, firkins	1
Files and setters for the different saws, a proportion.	

15th April.

The commanding engineer and staff were directed to accompany Lord Wellington from Villa Formosa to Elvas; leaving Lieutenant Trench, the royal military artificers and tools with the corps in the north.

20th April.

Head-quarters reached Elvas in the evening. The detachment of royal military artificers, under Captain **Ross**, was already there, and Captain **Squire** was making every possible exertion for securing the passage of the Guadiana. A large body of workmen, chiefly Portuguese, with Portuguese tools, were employed under Captain **Wedekind**, K.G.L., in completing a tête-de-pont at Juramenha; and other officers with parties of the troops were making fascines and gabions in the woods beyond the Guadiana, on the south of Badajos.

21st April.

An extremely rainy day. Colonel **Fletcher** visited Juramenha and Olivença.

22d April.

Lord Wellington reconnoitred Badajos, and decided to commence the siege immediately.

23d April.

A report was received from Mr. Pink, engineers' commissary at Lisbon, stating the impossibility of procuring carriage to forward from Alcacer do Sal the stores he had sent round to Setuval. In consequence, Lord Wellington ordered the proportion to be reduced as underneath; the remainder to be left in depôt at Setuval or Alcacer do Sal, as the order should happen to find them.

Proportion of Stores as reduced on the 23d April.

Gun platforms.	10
Screws and wrenches—a proportion.	
Shovels.	800
Helves	100
Pick-axes	800
Helves	400
Spades	200
Sand-bags, bushel	60,000
Tarpaulings, large	20
do. small	5
Spun yarn, coils	10
Spikes, 7 inch	500
do. 6 inch	200
Hammers, claw	10
Axes, broad	12
do. felling	50
Rope, tarred, 3-inch, coils, . . .	1
Fascine choakers	12
Box rulers	6
Padlocks and hasps	10

Adzes	12
Saws, pit	2
do. hand	12
Gimblets, spike	12
do. common, of sorts	20
Miners' tools chest	1
do. jumpers	6
do. borers	6
do. gads	4
Theodolite	1

At the same time, his Lordship authorised two car loads of the most indispensable small stores and artificers tools, to be ferried across the harbour to Aldea Gallega, to be forwarded from thence on mules.

To supply the deficiency of stores, the few contained in the magazines of Elvas were put at the disposal of the engineers, and the Governor, General Leite, did his utmost to collect tools from the country, and such as could be spared from Juramenha were ordered back to Elvas; but the Portuguese using generally *enxadas*, a small hoe, instead of shovels, the collection thus made was most unsatisfactory in quality as well as quantity.

25th April.

Colonel Fletcher fixed upon a spot a little below the junction of the Caya with the Guadiana for the position of the flying bridge, and selected the Quinta (large country-house) de Falcata, in its vicinity, on the right bank, as an entrepôt for depositing the stores, in readiness to be ferried over.

26th April.

Weather settled fair.

Fifty bullock cars were this morning delivered over to the department. They were immediately employed to transport the materials for renewing the infantry bridge of casks to Juramenha, the Guadiana having fallen five feet.

The Spanish boats were removed from Juramenha to the entrepôt, at the Quinta de Falcata.

27th April.

The following orders were issued this morning.

ALMENDRALEJO, 27th April, 1811.

1. The British infantry will furnish a party of artificers, to be attached to the engineer department until further orders, according to the following detail:

	Serjeants.	Corporals.	Drummers.	Privates.
2d division. . .	2 . .	2 . .	1 . .	56
4th do. . .	2 . .	2 . .	1 . .	44
	<hr/> 4	<hr/> 4	<hr/> 2	<hr/> 100

This party to be under the charge of a subaltern officer from each division, and is to consist, as far as possible, of non-commissioned officers and men who were permanently employed in the same duty on the lines of Alhandra, or otherwise of intelligent mechanics.

2. The British infantry will also furnish a party of carpenters and miners, in the following proportion, to be attached to the engineer department.

	Carpenters.	Miners.
2d division. . .	27 . .	20
4th do. . .	21 . .	16
	<hr/> 48	<hr/> 36

Each of these four parties to be in charge of a serjeant, who should, if possible, be of the same trade as the men.

4. The Honourable Major General Cole will be pleased to recommend three, the Honourable Major General Stewart five, and Major General Hamilton four, officers of their respective divisions to act as assistant engineers.

28th and 29th April.

Fifty bullock cars employed in moving stores, fascines, and gabions to the entrepôt.

30th April.

The river Caya having become fordable, the entrepôt at the Quinta de Falcata was no longer secure, and the animals were employed to bring back the boats and most valuable stores under the guns of Elvas.

1st May.

Ten horses, borrowed from the artillery, were detached to Abrantes with two boat carriages, to bring forward two Portuguese flat bottomed boats, to be used in transporting the stores across the river, in case of accident to the Spanish boats.

2d May.

The men ordered, under date of the 27th April, having joined at Olivença, and being divided into brigades, Captain By was detached with orders to proceed with the third, fourth, fifth, and sixth brigades of carpenters, with such country tools as could be procured, to

the Pinhel-de-Badajos, the moment of the investment, to cut timber for splinter-proofs and sleepers for platforms, plank, &c.; and to make fascines and gabions.

The other three brigades of carpenters were ordered to be similarly employed on the north side, for the attack of Christoval.

The men, not carpenters, were in the mean time to be daily instructed in the duties they would be required to perform at the approaching attack.

216 shovels received from Abrantes.

4th May.

The place was invested on the southern side.

The large Spanish boats moved from the glacia of Elvas to the Guadiana, and were launched as a flying bridge; but there being no investing force on the right of the river, they were for security hauled on shore on the left bank, and a guard sent for their protection.

5th and 6th May.

One hundred and twenty cars furnished to the department, were employed in removing stores and materials from Olivença, Juramenha, Elvas, &c. to the ground on the right of the river.

7th May.

Sixty cars remained loaded all day with tools and stores, in readiness to move to Christoval when invested. The other sixty were employed as yesterday.

8th May.

Christoval invested, and all the engineer transport given to that attack.

Ground opened in the evening on both sides the river.

9th and 10th May.

Ninety-eight cars, divided between the two attacks, were employed in bringing forward splinter-proof timbers, platforms, gabions, &c. It was found that a car would not bear a greater weight than six or eight cwt., and that not more than three gabions and six fascines could be placed on each.

The bullocks seldom travelled more than ten miles in the day.

11th May.

Fifty cars employed as yesterday at the attack of Christoval.

Thirty of the cars from the south attack detached to Elvas.

12th May.

At noon the reduced proportion of stores, as arranged on the 23d April, arrived at Elvas, and fresh means of conveyance being held in readiness, a considerable number of the tools were brought to the park by 8 P.M., in time to be delivered to the workmen on breaking ground.

13th May.

All the cars which could be procured, employed to take back the tools, sand-bags, &c.

14th May.

All the gabions, fascines, splinter-proof timbers, and platforms, collected into piles and burned.

NOTE 3.

ABOUT the time that the proportion of engineer's stores, detailed in the foregoing note, was ordered from Lisbon, (10th April,) Lord Wellington directed the following proportion of heavy ordnance and ammunition to be sent from Lisbon to Salvaterra, to be forwarded to Elvas, to replace the guns and shot to be taken for the siege of Badajos.

24-pounders, iron, 7 $\frac{1}{2}$ feet Portugueze	
marine guns	6
24-pounders, brass, 10 feet garrison guns	9
18-pounders, brass, garrison guns . .	5
Sea-service carriages, with side arms .	20
24-pounder shot	6000
18-pounder do.	2000
Triangle gins	4

Deficiency of carriage, however, prevented more than the six iron 24-pounders and the 24-pounder shot reaching Elvas in time to be used at this siege.

NOTE 4.

IT was this decision which occasioned the great distance of the breaching battery from the castle. The parallel had been opened at the precise spot, and traced in the direction originally planned; but the small number of workmen, the besieging corps could supply,

would not admit of its being opened the first night to its full extent, which would have brought it to the intended distance of 500 yards from the castle. It should be recollected, that the original project was to keep the left of the parallel, which was exposed to a great front fire, far retired, and to make the parallel incline towards the place with its right, on which little or no fire could be directed, and consequently, every yard the parallel was lengthened brought it a certain degree nearer to the place. On the distribution of the workmen the second night, as their numbers were still insufficient to open the parallel to the proposed extent, and throw up the batteries likewise, it became a question, whether to defer the commencement of the batteries till the following night, and place them in their proper situations, or save twenty-four hours in their construction, by placing them at the distance the front of the parallel then was from the castle. The latter was preferred.

NOTE 5.

THE brass 24-pounders used at this siege were very long and heavy pieces, cast chiefly in the reigns of Philip II. and Philip III. of Spain, and John IV. of Portugal, their bores were very wide for the shot supplied, and the windage, consequently, far exceeded that allowed in guns of the present period.

The shot indeed were so low that, in general, there

was room between the shot and the bore, to put a man's finger in.

These guns were also badly bored, and generally enlarged in the muzzle from former use, the carriages were awkward and lumbering, and were very much shaken and otherwise injured at the conclusion of the siege; and there were no means of repairing or replacing them.

The probable daily expenditure of ammunition was at first calculated at the rate of 120 rounds a gun, and 50 rounds a howitzer; but after the first day's firing of the south attack at this rate, when the failure of the brass guns became evident, it was thought necessary to regulate the period between each round, in order to give the guns time to cool. This interval was fixed at seven or eight minutes, which brought the daily expenditure to about 100 rounds a gun, and latterly it was diminished to about 90 rounds per gun, by carefully allowing ten minutes between each round.

But these precautions do not seem to have been of much value, for the deterioration of the ordnance was pretty equal at both attacks, though the greatest expenditure on the Christoval side scarcely amounted to 100 rounds a gun, and after the first two days it did not exceed 80 rounds each.

It is to be observed, that in this siege the principal object of both attacks being to breach, a very small portion of the fire was directed against the ordnance or defences of the place, and every round was fired with the full charge.

The howitzers were of the old construction, and unequal in the dimensions of their chambers.

NOTE 6.

If it were deemed necessary to bring forward any authority to support the feasibility and propriety of this attack, it would be found in the remarkable coincidence between it and the successful attack of the castle of Nice, by the Duke of Berwick, in 1705, as stated in the *Mémoires de Berwick*, and in Quincy's History. We there read that the castle of Nice was exceedingly strongly fortified on three sides, with several lines of works; but on the fourth side, which was very high, and of difficult ascent, its enceinte was composed of a single line only, and that a naked wall built on the edge of a precipice, it being imagined that its great height would prevent the wall being breached by cannon, or, if breached, being assaulted.

The duke, nevertheless, attacked the place on the side of the heights, and in a first parallel, at 600 yards distance, placed 50 pieces of ordnance in battery to breach the exposed wall, and other 20 pieces in situations to take in reverse and enfilade it; he also put 16 mortars in battery to annoy the interior. These batteries opened simultaneously on the 16th November, and firing incessantly till the 6th January, had nearly beaten down the whole extent of the exposed wall. The assault was ordered to take place the same night, but at dusk the governor beat the chamade and capitulated.

The two operations were therefore as exactly similar as possible, and the difference in their results must be looked for in the difference of the means employed.

Marshal Berwick put in battery 70 guns and 16 mortars, and expended 700,000 lbs. weight of powder.

At Badajos, there were put in battery only 30 guns, 6 howitzers, and 4 substitutes for mortars, and the expenditure of powder was only 139,008 lbs.

It is but justice to this attack to add, that in every document, both public and private, found in Badajos, the breaches in Christoval are represented to have been not only practicable, but easy; and the breach in the castle was considered to have been in a state to be assaulted, from the night of the 8th June.

NOTE 7.

THE injury done to the defences of Almeida by General Brenier, was very judiciously planned, and very successfully executed. (*Plate X. Fig. 1.*) The fronts selected for destruction were those attacked by Marshal Massena, being next the Coa on the south west, and which fronts have always been considered the weakest, in consequence of their scarps being much exposed to the fire of batteries from a height at a moderate distance, and also from their ramparts being too elevated to see, in a sufficient degree, the ground in their front.

Along the *chemin des rondes* of these fronts, at intervals judged to be 25 feet, shafts were sunk to the depth of 15 or 18 feet close at the back of the escarp wall, (which is 30 feet in height,) and chambers formed behind the counterforts on each side of the bottom of the

shaft for the reception of cases of gunpowder. These being deposited and well secured from the effects of moisture, the shafts were firmly tamped, and a saucisson led upwards from the gunpowder through the tamping, to the extremity of which a fuse or portfire was attached.

The escarps of two fronts, with those of a face and two flanks of adjoining fronts, being thus prepared to be blown down by means of 150 fougasses, all the field guns, carriages, shot, implements, and military stores in the place, were ranged along the ditch at their foot. On the night of the 10th May, at the moment of the evacuation, portfires, intended to burn till the rear guard was well off, were lighted, and though the mines went off in very irregular succession, still they blew down the entire revetement, some of it in pieces of enormous magnitude, (ten or fifteen feet square of superficies,) other parts in smaller compact portions, and some as loose stones and rubbish. The mass thus thrown forward nearly filled the ditch, and buried or destroyed every thing which had been placed on its surface. The revetement being overturned, the earth of the rampart behind it, loosened by the explosion, formed a very easy slope, and the ramparts of Almeida were for the moment laid completely open. The counterscarp, covered-way, and glacis, however, remained uninjured.

Several shafts, left in an unfinished state by the French, were by order of Sir Brent Spencer completed and exploded, when he marched with his corps to the Alemtejo in the following month, and utterly demolished other considerable portions of the revetement.

In the performance of this duty, Lieutenant Trench,

the only officer of engineers with the corps, was, from the awkwardness of the uninstructed soldiers employed under him, blown to pieces; and, in consequence, no report could ever be obtained of the details of the operation, or of the quantity of powder used, nor of the exact distances of the French shafts, or the precise manner in which they applied the powder.

With a view to supply this deficiency of detail, those of two or three similar operations are here given.

Fig. 2.—In the year 1810, forts Barbara and Felipe in front of Gibraltar, were ordered to be blown up under the direction of Captain Harding. To effect this, he sunk shafts from the top of the parapet, at the interior extremity of the counterforts, to the level of the bottom of the ditch, where he excavated a chamber into the masonry of each counterfort, and loaded each chamber with $8\frac{1}{2}$ barrels of powder. The shaft was then filled up with clay or sand, and fired by means of a saucisson led through the stopping of the shaft to the top of the parapet. These mines, like those of Almeida, exploded very irregularly, but, from the magnitude of their charges, utterly blew the forts to pieces.

Figs. 3 and 4.—In 1809, Lieutenant Colonel Johnston destroyed the revetement of the bastion La Valiere of fort Bourbon, at Martinique, by an application of the powder, considered to be similar to that of the French at Almeida.

The height of the revetement at the salient angle of the bastion was 38 feet, and the parapet rose 18 feet above it, making the total height 56 feet. The thickness of this revetement at its base was 10 feet, with counterforts 12 feet apart: the counterforts were 6 feet

thick next the rampart, 5 feet at their inner extremity, and 6 feet in length.

Colonel Johnston perforated from the face of the revetement through the thickness of the wall, and formed five chambers in the clay at the inner extremity of the counterfort at the points 1, 2, 3, 4 and 5, and loaded them as follows:—

1	with 180 lbs.
2	270
3	360
4	90
5	180 placed under the counterfort.

The explosion blew down the entire revetement for 114 feet in length of the right face, and for 147 feet in length of the left face, except a portion of 12 or 15 feet, *ab*, which, though much injured, remained standing in the long space between mines 3 and 4. The earth of the rampart behind the wall blown down generally laid at an angle under 45°, as at Almeida.

The destruction of the revetements of Menin in 1744, as detailed by Cormontaigne, was also very similar.

Fig. 5.—The height of the revetement was 30 feet, and the counterforts 15 feet from centre to centre, and the chambers of the mines were placed at 30 feet distance from each other, so as to be in the centre of each counterfort; the charge was 100 lbs., French, of powder, and the effect extended from mine to mine.

On clearing away the rubbish in 1817, the foundations were generally found sufficiently perfect to serve for the new walls, but any portions of the counterforts or scarp wall which remained, were cracked in every direction.

The workmanship was paid for at 3*s.* 2*d.* for every six

feet running of gallery in the clay at the back of the escarp wall between the counterforts, and 4s. for every six feet in the masonry, and the tamping was paid for at 2s. 4d. per six feet, making the expense without the powder, about 5s. for every 40 cubic feet of revetement blown down.

The galleries were made 3 feet high by 2½ feet wide.

After the second blowing up of Almeida, its state was as follows:—Two fronts had the scarp walls of their faces, flanks and curtains, and one face of their ravelin, blown into the ditch. One front had both flanks and one face of a bastion blown into the ditch, and a fourth front had one flank of its left bastion blown down.

The ditch, 60 feet wide, was so full of rubbish that the counterscarp formed no obstacle, and the top of the rampart could be attained from the covered-way without difficulty.

There lay scattered about 197 pieces of ordnance, either spiked or unserviceable, 155 gun carriages or mortar beds, with a vast number of tumbrels, field carriages and other stores, completely knocked to pieces or buried by the explosion.

Almeida remained in this state of ruin till the 5th October, when Lord Wellington took his chief engineer with him round the fortress, and having ascertained that only some short lengths of the scarp, not exceeding 10 or 12 feet in height, remained perfect, decided, to render the ruined fronts defensible against a coup-de-main by means of a dry stone revetement, to be built parallel to the original revetement, but 10 or 12 feet in its front. The new wall to be formed with the stones found in the ruins, and, to give it strength to resist the pressure of the

earth, to be carried up at an angle of some degrees less than the perpendicular.

The height of this demi-revetement was to be regulated by the level at which the counterscarp ceased to cover the ramparts from the hills beyond the glacis, which was generally at 14 feet, and, on the summit of the new revetement, a row of strong fraises being laid, the remaining height of the rampart was to be gained by an earthen slope.

Lieutenant Colonel Caula, of the Portuguese engineers, with 40 masons and 800 labourers from the Trancosa militia, was charged with restoring the revetements.

The restoration of the parapets and other defences, was performed under the superintendence of Captain McCulloch, by military working parties from the army; and the whole was completed in December, 1811.

The expense was defrayed out of the military chest.

The tools of the field depôt were applied to this service, till others could be brought forward from the depôt at Villa-de-Ponte.

The two following orders show the regulations under which the military worked.

G. O.

FRENEDA, 7th October, 1811.

A working party, consisting of 200 rank and file of British troops, and 200 rank and file of Portuguese troops, with officers and non-commissioned officers in proportion, of the 6th division, are to proceed tomorrow morning to Almeida, to be employed on the works of that place. The party are to take their arms &c., with them, and the commissaries of the 6th division will take measures to supply them with provisions. This

party are to work on the 9th, 10th, 11th, and 12th, on which last day a similar party are to be sent to relieve them, and they are to return to their quarters on the 13th, and the relieving party will likewise be relieved after four days work.

The men are to receive working money at the rate allowed to the soldiers of the several nations, and this working money is to be paid to the officers before the men march away, after being relieved by the officer of engineers under whom they shall be employed.

Such of the party as are bricklayers or stonemasons, will be employed as artificers, and will receive double pay.

It is to be clearly understood, however, that those who do not work will get no pay.

G.O.

FRENEDA, 16th November, 1811.

All the masons in the British and Portuguese regiments in the 6th division, and in the regiments of General Pack's brigade, are to be sent to Almeida, on Monday; those of the 6th division under charge of an officer, those of General Pack's brigade under charge of a non-commissioned officer, where they are to work till the following Sunday, and to return to their regiments on Monday. On Sunday, the 24th inst., these masons are to be relieved by the masons in the British and Portuguese regiments in the 4th division, and by the masons in the regiments of Colonel M'Mahon's brigade, under charge of an officer and non-commissioned officer; and these are to be relieved again on Sunday, the 1st December, by the masons in the 6th division, and in General Pack's brigade, and the relief is to be made weekly in the same manner.

The officers and non-commissioned officers in charge

of these men, must be paid their working money, before they quit the fort, when relieved.

This order is not to interfere with the execution of the order of the 7th October, regarding the working parties of the 6th division for Almeida, only that the number, instead of being 400, is to be 360, of which one half English, and one half Portuguese.

Fig. 1 shows the progress the French trenches had made at the moment of the explosion of the magazine on the 26th August, 1810, which caused the surrender of the place.

NOTE 8.

The following are the details of the removal of the battering train and siege stores from the transports in the Douro to Villa de Ponte, and from thence to Almeida.

Lord Wellington, on the 19th July, selected from the train, detailed p. 92, the following proportion, to be immediately brought forward.

24-pounders, iron	34
18-pounders, do.	4
10-inch mortars, iron	8
8-inch howitzers, brass	2
	<hr/>
	48

with a sufficiency of ammunition for two days' firing, at the rate of 175 rounds a gun, and 80 rounds for each howitzer and mortar per day.

The original calculation for the attack proposed by Colonel Fletcher being

Twenty 24-pounders, for breaching and direct fire, 8 days, at 100 rounds per day 16,000

Eighteen 24 or 18-pounders, to ruin the defences, 10 days, at 50 rounds 9,000

In order to make up this quantity of gun ammunition, it was arranged to bring forward 1200 barrels of powder, and to select from the Portuguese shot scattered about Almeida, all such as could be made to serve for the English guns. This measure supplied 8,000 good 24-pounder shot, and nearly 4,000 Spanish 16-pounder shot, which answered very well for the 18-pounders.

The ordnance were calculated to require 8 pair of draft bullocks each for their removal, and the whole equipment the number underneath.

	Pairs of draft Bullocks.	Bullock Carts.
For ordnance, spare carriages, forges, &c.	384	. .
1200 barrels of powder		171
24-pounder shot, 350 rounds per gun		396
18-pounder do. do. do.		35
10-inch and 8-inch shells, 160 each		200
Laboratory and general stores		90
ARTILLERY	384	892
ENGINEERS' STORES		200

It will be seen that the original memorandum of the 19th July, for the removal of the train, was drawn up on these data; but, subsequently, the 20 $5\frac{1}{2}$ -inch howitzers were added, making 68 pieces of ordnance to be brought forward. The $5\frac{1}{2}$ mortar ammunition, with the train, being transferred to the howitzers, completed them to 520 rounds each.

NOTE 8.

3d August, Major Dickson, Captain Marshall, engineers, and two companies of artillery (see Nos. of memorandum) having arrived at Oporto, the transport of the guns, siege stores, and tools, into commenced.

The commissariat had been using every exertion in power for many days previously, to collect a sufficient number of boats for this service, and, to aid their avours, an embargo had been laid on all traffic up down the river; but during summer the water is so low in the Douro, that the largest description of boat cannot, when loaded, navigate over the shallows between Oporto and Vimeiro, and the small boats dare not attempt to pass the rapids above Vimeiro; so that only boats of a medium burden can be employed between Oporto and Pezo de Regoa. Even these only take two loads of their cargo to Vimeiro, the remainder following them in small boats, and being transhipped when above the shallows; and at this period of the year it required ten or eleven days to reach Pezo de Regoa, opposite Lamego, from Oporto.

The transhipment of the guns and stores, though occasionally delayed from want of conveyance, was completed, and the boats sent off in divisions as follows.

	Large.	Small.
August 7th, sailed	21	19
8th,	19	18
9th,	26	13
10th,	12	2
11th,	4	3
12th,	9	15
13th,	7	10
14th,	7	9
	<hr/> 105	<hr/> 89

During the transshipment, the whole of the carriages were altered for bullock draft; and 300 solinhos,* and between 6 and 700 open boxes for the conveyance of shot and shells were made, and dispatched with the train; the whole occupying 194 boats.

On the 16th the companies of artillery marched for Pezo de Regoa, to meet the flotilla on its arrival and aid in disembarking its lading; for which purpose 1,000 militia had been assembled to give the necessary working parties.

Major Dickson, on his journey to Oporto, having examined the route by Trancosa, and having found it very mountainous and difficult, with a number of passes so steep and rocky as to require much time to render them practicable for heavy artillery, proposed that the route of Villa de Ponte, Torrinha, Cotimos and Pinhel, should be substituted for the Trancosa road, and that one of those places should be the entrepôt instead of Trancosa. Villa de Ponte having in consequence been named, every thing was ordered to be directed upon that place as soon as disembarked at Pezo de Regoa (Lamego).

14th August.

Major Dickson being, from severe sickness, unable to leave Oporto, the arrangements for the march of the train were confided to Major May; and a sufficiency of bullock cars having been collected at Lamego through the exertions of Commissary General Boyes, the train was sent off in divisions for Villa de Ponte, without delay, under the following instructions.

* Strong pieces of round wood, 3 inches in diameter, and from 3 to 4 feet long, with locks and chains at each end for bullock draft, which are infinitely superior to rope traces.

Instructions to Officers commanding the Divisions and Reserve of the Battering Train.

Pezo de Regoa, 26th Aug. 1811.

No. 1.—The whole of the battering train moving for Lamego will form five divisions and a reserve, as follows :—

	24-pr.	18-pr.	10-inch mortar.	8-inch howitz.	5½-inch howitz.	Total.
1st division, Lt. Bouchier	12	..	..	..	..	12
2d do, Lindsay	12	..	..	..	..	12
3d do, Capt. Power	10	4	..	..	..	14
4th do, Terrel	..	..	..	2	20	22
5th do.	..	..	8	..	..	8
	34	4	8	2	20	68

Reserve, by an officer of Captain Holcombe's company, upon its arrival.

2.—No. 1 and 2 divisions will have attached to each 24-pounder, and travelling with it on bullock cars, 340 round shot and 10 case; for which there will be ready filled 145 8 lb. (full charge) and 145 2 lb. (ricochet) cartridges; the remaining 60 rounds, full charge, required to complete to 350 rounds per gun, will be made up, on the arrival of the train at its destination, from the empty cartridges and 64 barrels of powder with each division.

3.—The third division will have the same proportion of ammunition for the 24-pounders travelling with it, as for the 1st and 2d. The 18-pounders, not having any cartridges filled, will carry on with the division empty flannel cartridges, and powder in barrels to complete the 350 rounds proportion to two-thirds full charge, and one-third ricochet, or for 234 6lb. cartridges, full charge, and 116 1½lb. ricochet, the powder for which will be 54

barrels for 24-pounders, and 94 for 18-pounders, making a total of 148 barrels.

4.—The 4th division will have 160 rounds each piece, viz.

For the 8-inch brass howitzers, 130 common shells, 20 spherical case and ten common case, for which there are 140 $3\frac{1}{2}$ lb. cartridges filled, and 20 3lb. for spherical case empty, which will require 2 barrels of powder.

The $5\frac{1}{2}$ -inch iron howitzers will have 80 common shells, 70 spherical case and 10 common case, for which there is a sufficiency of 2lb. filled cartridges.

5.—The 5th division will have 160 common shells for each mortar, at 4lbs. charge, requiring 95 barrels for that and filling the 2lb. cartridges to burst the shells.

Note.—It is considered an unnecessary detail to point out the quantity of side arms, tubes, portfires, fuzes, slow match, &c., to render the divisions complete, since no mistake should occur where the number of pieces of ordnance and quantity of ammunition has been so fully given.

6.—The reserve will consist of the spare carriages, and the whole of the ammunition not already enumerated, to bring up which, the bullock-carts, travelling with divisions, must be sent back as soon as they have deposited their loads at Villa de Ponte.

This reserve will be commanded by an officer of Captain Holcombe's company upon its arrival; he will be assisted by Mr. Assistant Commissary Butcher, who is charged with the particular superintendence of the ammunition and stores, and will have under his direction the whole of the artificers not required with divisions.

7.—The officers commanding divisions and reserve

are held responsible in every particular for the good order and application to immediate service of the same. The want of a sufficiency of officers of the civil branch renders a substitute necessary; therefore, each officer in command will report the names of such non-commissioned officers as they may consider capable of acting as conductors of stores, who will be immediately appointed, and receive an extra allowance of pay as such accordingly. These assistant conductors will have a particular superintendence of the ammunition and bullock carts, and have distributed in charge a certain number of gunners, attached to a proportion of the same, with which they must always travel and remain, reporting every accident and occurrence to the assistant conductor, and he to his officer.

8.—On no account is any officer to attach to his division more than the given proportion of ammunition, nor any article of stores above what is absolutely necessary **to equip the divisions; an infringement of this order must be a great detriment to the service, and can be of no utility to him.**

9.—Each officer commanding a division, or the reserve, will make out and keep by him, ready to produce, a return of the number of pieces of ordnance in his charge, quantities of ammunition, conductors, gunners, militia men, oxen, bullock-carts, drivers, &c. &c. with the same.

10.—It is requested officers in command will keep together the brigades of bullock-carts, in the manner directed by Mr. Deputy Commissary General Boyes, than which a more simple and efficient mode cannot perhaps be adopted.

One division consists of about 100 carts, under the

charge of a Portugeze conductor, which is subdivided into 3 brigades, having each a cabo or corporal.

11.—The movement of a battering train of artillery, through such a country as Portugal, should call forth all the zeal, activity and intelligence of the officers and men, without which it would be impossible to meet the expectations of His Excellency, the Commander of the Forces, as to the time he has laid down for its completion.

12.—Enclosed are returns to facilitate the execution of these instructions, viz.

A. contains the quantity of weight and ammunition, considered as sufficient to load the large carts to 6 cwt., and the small ones to 5 cwt., but should any carts break down on the march, and there be none at hand to replace them, the bullocks may be applied to double their draft with the strongest carts, in which case the weight drawn may amount to 7 or 8 cwt. One tenth of the carts, however, will be taken on as spare.

B. the quantity of shot, shells, full and empty cartridges, and barrels of powder, attached to the several divisions and reserve, together with the number of oxen for draft of ordnance, and spare carriages and transport of ammunition.

JOHN MAY,
Major of Brigade.

(A.) PEZO DE REGOA, 1811.

RETURN of the Number of Boxes of Ammunition of the following nature, which is considered necessary to be loaded on Wains of the description herein mentioned.

	No. of Boxes.	Wains.	
		Large.	Small.
		Weight in lbs.	lbs.
24-pounders . .	Round . . { 17 in No. and 20 Wads	1	448
	{ 22 in No. and 20 Wads	1	568
	Case 10 in No. and 20 Wads	2	555
	Grape 6 in No. and 20 Wads	3	517
	Spherical case 6 in No.	5	525
18-pounders . .	Round . . { 22 in No. and 20 Wads	1	448
	{ 27 in No. and 30 Wads	1	538
	Case 6 in No. and 20 Wads	3	409
	Grape 8 in No. and 40 Wads	4	532
	{ 8 in No. and 20 Wads	2	398
10-inch mortar	Spherical case 10 in No.	3	517
	Common shells 3 in No.	4	520
	Common shells 3 in No.	2	570
8-inch do.	Spherical case 2 in No.	3	520
	Case shot . . 3 in No.	5	450
	Common shells 10 in No.	2	408
5½-inch do.	Spherical case 6 in No.	3	480
	Common case 2 in No.	5	525
	{ 2 in No.	2	500
CARTRIDGES for 24-pounders filled with	8 lbs. of powder . . 95 lbs. each box	5	475
	{ 95 lbs. each box	6	570
	3 lbs. do. . . . 53 lbs. each box	9	495
	{ 53 lbs. each box	11	610
	6 oz. do. . . . 36 lbs. each box	12	432
	{ 36 lbs. each box	16	596
3½-inch howitzer	2 lbs. do. . . . 50 lbs. each box	9	450
	{ 50 lbs. each box	11	550
	1 lb. do. . . . 50 lbs. each box	9	450
	{ 50 lbs. each box	11	550
8-inch howitzer	10 oz. do. . . . 50 lbs. each box	9	450
	{ 50 lbs. each box	11	550
	3½ lbs. do. . . . 60 lbs. each box	8	480
	{ 60 lbs. each box	10	600
Powder W. B. of 90 lbs. each box	1lb. 14oz. do. . . . 56 lbs. each box	8	448
	{ 56 lbs. each box	10	560
	{ 90 lbs. each box	5	450
		6	540

The road from Pezo-de-Regoa to Villa de Ponte had been repaired in a most admirable manner, by the directions of the governor of the province, General Baccellar. The sharp and difficult turnings in the several villages, and various hollow ways and rocky rises, &c., had been avoided by carrying the road round them, in many cases, through vineyards and other cultivated grounds, and the several divisions of the train performed the distance, 8 leagues (32 miles), in three days, with trifling damage, except that the wheels of the 24-pounders, having become so dry from long stowage as to open on the road, it was found necessary to tighten them all up.

The siege equipment was thus all collected at Villa de Ponte, in the second week of September; but the movements of Marshal Marmont having caused the enterprise against Rodrigo to be deferred, it was ordered to halt there till further orders. At the end of September, the disposition of the train and siege stores for movement was as follows.

Two companies of British artillery and 250 Portuguese artillery under Major Dickson.

	Pairs of draft Bullocks.	Bullock Carts for stores, &c.
Lt. Bouchier, 1st division, twelve 24-prs.	105	336
Capt. Holcombe, 2d do. twelve 24-prs.	105	336
— Power, 3d do. ten 24-prs. }	118	363
four 18-prs. }		
Lt. Love, 4th div. twenty 5½-in. howitz. }	74	232
two 8-inch do. }		
Capt. Miron, 5th div. eight 10-in. mortars	79	323
Spare	69	. .
Lieutenant Marshall, Engineer equipment	. .	320
Total, 68 pieces of ordnance,	550	1910

This increased number of bullock cars, beyond the original calculation, was found necessary in consequence of the draft bullocks of Beira and Traz os Montes being small, and of a description inferior to those of the Alemtejo. This enormous number of 4,920 bullocks were actually present with the equipment at this period; but, soon afterwards, a portion of the car bullocks were ordered to Lamego, to assist in forwarding provisions to the army, which, with desertion and other casualties, reduced their effective numbers before the movement to Almeida, to 400 pairs for the artillery.

The draft bullocks, which were of an excellent description, were never separated from the train.

On the 18th November, the engineer stores marched on Almeida by Trancosa, and the same day the ordnance of the first division of the train by Pinhel. On the 19th, 20th, 21st, and 22d, the ordnance of the other divisions of the train successively moved, and reached Almeida

on the 22d, 23d, 24th, 25th, and 26th November. As soon as parked, the draft bullocks were sent back to Villa de Ponte, on account of the greater facility of foraging them in that neighbourhood.

Little or no ammunition accompanied the movement of the ordnance from Villa de Ponte, for want of cars; but, as means of conveyance could be obtained, it was employed throughout the month of December in bringing forward powder and shot to Almeida; but from the severity of the weather, and the shortness of the days, only a very reduced proportion of gun ammunition, and no mortar ammunition had been brought forward at the end of December, when the siege was ordered to be undertaken. Luckily, however, the eight thousand 24-pounder shot which had been found serviceable in Al-

meida, in some degree covered the deficiency of gun ammunition, but as it was never found practicable to bring forward from Villa-de-Ponte a single shell for the mortars or howitzers, the available train for the operation was limited to—

24-pounders	34
18-pounders	4

NOTE 9.

G. O.

FRENEDA, 18th Nov. 1811.

1. The 3d, 4th, 5th, and 6th divisions are to send artificers to Almeida, to march on Wednesday as under-mentioned, to work under the directions of Major Sturgeon, of the Royal Staff Corps. A steady non-commissioned officer must go in charge of the men, from each division.

	Carpenters.	Sawyers.	Wheelers.	Blacksmiths.
3d division, . .	20	10	1	4
4th do. . .	20	10	2	4
5th do. . .	20	10	6	4
6th do. . .	22	10	1	4
Total	82	40	10	16

This bridge was formed of 18 tressels, placed 22 feet asunder, and measured on the platform nearly 400 feet in length. It was fixed at Marialva near Salices, and in order to enable the tressels to resist the force of the current, a row of strong piles was driven into the bed of the river above the bridge, and the feet of the tressels were braced to them: as a further precaution, a very great

weight of large stones was piled between the tressels, and confined there by a rough watling of branches of trees. The bridge answered perfectly well till the very great rise of the river after the siege.

Major Sturgeon, who had the sole direction of this construction, was a man of much and varied talent, who having been educated at the Military Academy at Woolwich, and having acquired considerable experience as an artillery officer, was selected for promotion into the staff corps soon after its formation. In consideration of great claims from service, this occasion was seized to give him the rank of Lieutenant Colonel, and he would in all probability have risen an ornament to the higher ranks of the military profession, had not his career been untimely closed in a skirmish beyond the Pyrenees.

NOTE 10.

At this siege, ground was broken the very night of the investment, and Lord Wellington showed much judgment in thus departing from ordinary custom. It was so doing which enabled him to reduce the place in a period so short, as to be inexplicable to Marshal Marmont, who, being ignorant of the circumstance, naturally calculated an investment of four or five days. But, however excellent such proceedings in this case, it would not do for a general practice. There were peculiar circumstances which rendered it applicable to this attack.—

1st. Rodrigo is a small, and by no means first rate fortress, therefore only moderate preparation was required for the attack of it.

2d. It may be said to have been invested from the 18th December, the day the ultimate preparations for attacking it commenced; for the place was shut up by the guerrillas, and the siege stores and materials were collected, and, though not positively on the ground, such arrangements had been made, and were carrying into effect, as ensured their being deposited in the depôts at any required moment.

Many might suppose from the rapid movements on this occasion, that a siege can be undertaken lightly, and on the spur of the moment; but if they peruse the various arrangements made by Lord Wellington from July to January, they will feel that this attack affords no grounds for such ideas; that on the contrary it received the most ample consideration—that the arrangements were made with the utmost care, and that they were in progress through a long period previously to the final day. In fact, if the troops had been before the place, the stores could only have been one day's march more forward; and as they commenced that day's march, so as to be on the ground immediately after the troops, the place may be said to have undergone a long investment. The same peculiar circumstances of being able to collect the materials in the immediate vicinity of the place, applies also to the short investment of Badajos prior to the final attack.

It is of so much importance, it should be understood that the time occupied after an investment in collecting materials previously to breaking ground, is not

in all cases time lost, that no excuse is offered for the further extension of this note.

The most advantageous period of defence, in a well constructed place, being during the progress of the attack from the third parallel, till the final lodgment on the breach, it becomes a principal consideration with a besieger, to be assured of the supply of the vast mass of materials required for that purpose previously to breaking ground; as the delay of a day in such a forward situation occasions more loss of life, than the delay of a week at the distance of the second parallel. No policy at a siege can be worse than beginning the operation with a small quantity of materials, and making the attack keep pace with the supply. It has the appearance of gaining time, but, in fact, it is otherwise. Suppose a commander, after investing a place, to ascertain that by deploying his full force, he can crown the crest of the glacis in ten days; that on the day of the investment,

he is able to bring up stores and materials sufficient for the first parallel; on subsequent days for the second parallel, and progressively sufficient for crowning the glacis on the tenth day; but that the great load of materials necessary for the operation beyond that point, cannot be collected till the fourteenth day. Under such circumstances, let him begin the attack the first or fourth day of the investment, on the fourteenth day the work can be no further advanced than the crest of the glacis. To begin the fourth day would have the following advantages over beginning on the day of the investment. The garrison would have four days less time to form their retrenchments, move their artillery, make their temporary magazines and splinter-proofs, double

palisade their covered-way, and adopt a hundred other precautions, which can only be commenced after the side of attack is known. The besiegers themselves would be so much less time exposed to the fire of the place, and as the enfilading batteries must continue open till the crowning of the covered-way commences, four days' consumption of powder, and the tear and wear of the carriages, and the consequent fatigue to the artillery and their working parties would be avoided.

The same reasoning applies to any other point of the attack. Therefore, the period of investment previously to breaking ground, is neither nine days, as usually stated in military writers, nor any other fixed number of days, but depends on a comparison of the number of days the trenches will be open, with the number of days required to bring up the whole of the supplies. When a general decides to attack a place, and has fixed on his plan of operations, the engineers calculate the number of days required for carrying it through, say 20, and also the quantity of materials necessary for its details. Should the general, on a reference to the carriage he can command, find that he cannot deposit that quantity of materials on the ground in less time than 35 days, then the period previously to breaking ground would be 15 days; for as the attack cannot be carried through till the necessary materials arrive, or 35 days, it is evident that every hour the siege commences, previously to the expiration of 15 days, is so much additional trouble to the besiegers, additional expenditure of ammunition, and additional time granted to the garrison to prepare their means of resistance.

A principal object of the investment being to prevent

the garrison procuring the necessary supplies to sustain a siege, and sending out of the place their useless incumbrances, the investment should be undertaken when least expected, and, if possible, under the show of being intended for some other operation. The several investing corps should march secretly, and each arrive at the same moment before the side of the town it has to blockade. By such an arrangement, frequently, bodies of the garrison out foraging, &c., will be prevented returning into the place: for instance, when Lord Wellington reconnoitred Badajos in April, 1811, his escort consisting of a strong body of light troops, and some cavalry, forded the Guadiana, and arrived unexpectedly in front of the town, whilst the sappers, with the carts and waggons of the garrison, attended by an escort of two or three battalions, were two leagues from the place felling wood, and they were consequently cut off from all possibility of returning into Badajos, had the circumstance been known. **As it was, they arrived so near the defences, before any arrangements could be made for attacking them, that the garrison sent out additional troops to cover the entry of the convoy, which, thus supported, forced through the British, occasioning them a considerable loss.**

During an investment, the garrison should, if possible, be confined to their works. This cannot always be effected in the day-time; but at night it generally may, and the investing corps should regularly at dusk push forward all its posts. Great care, however, should be taken to support them well, and to change the situation of the pickets frequently, or they are likely to be swept into the place. Should parties of different strength be made

to patrol at uncertain hours to the glacis, it will keep the garrison from sending out small bodies, and tend greatly to prevent their discovering the working parties on the night of breaking ground.

At these sieges, the bivouacs of the investing corps were invariably formed beyond the range of the artillery of the place, and generally out of view of the garrison; but, at each attack, posts both of cavalry and infantry, and even of field artillery, were permanently established in covered and concealed situations, from 800 to 1,200 yards from the defences.

NOTE 11.

LIGHT balls are of such excellent use in discovering working parties, that surely some means ought to be taken to render them of dangerous approach, by attaching a grenade or other missile so prepared as to explode at uncertain periods of their burning.

At these sieges, two or three bold men of the engineers' brigade, were always in readiness to run up and extinguish the light balls as they fell, and generally succeeded in a few seconds in smothering them, with filled sand-bags, or by shovelling earth over them.

The garrison always directed their fire on the men whilst so occupied, which diverted it altogether from the working party, employed perhaps at a few yards distance from the ball, to its right or left. Some casualties

NOTE 11.

to the men thus employed, but generally they
guished the light ball before a second discharge
y could be brought upon them.

NOTE 12.

our required for these batteries,
he time and labour required for
ary siege batt First, the period of the year
as the commencement of January, when there is more
ark than day-light. Secondly, the weather was bitterly
ld at night, and the ground frozen. Thirdly, the men
mployed to raise the batteries were in march, or on
ty, for thirty hours consecutively. Fourthly, the fall
of the hill caused the excavation of the terre-plein of
these batteries to be two or three feet deeper in rear
than in front, being a great increase to the labour.
Lastly, these batteries were not, like all other first bat-
teries at a siege, merely temporary shelter for a supe-
riority of guns to fire against, and overpower other
guns; but masses of earth, to screen and keep in secu-
rity guns and men, against a steady and uninterrupted
fire from the commencement till the conclusion of the
siege. They were, in consequence, made of far more
than the usual height, thickness, and capacity. A bat-
tery, thus passive, and of patient endurance under a
violent cannonade, becomes at the end of the day a scene
of ruin scarcely to be imagined, and if not of the most
solid construction would assuredly be silenced.

The fire of the garrison being, during the erection of No. 4 battery, divided between it and the batteries previously finished, the workmen, notwithstanding its being made of more than the usual height and thickness, completed it in fifty hours.

NOTE 13.

Detail of the proportion of Tools and Stores ordered for the Siege of Badajos, Jan. 1812.

Shovels	1,000
Spare helves	150
Pick-axes	1,200
Spare helves	300
Spades	300
Mattocks	200
Tarpaulings, large	20
do. small	20
Spikes, 7 inch	6,000
do. 10 inch	1,000
Saws, hand	30
do. pit	12
do. crosscut	6

Setters and files for the above, a good proportion.

Adzes, carpenters	30
Claw-hammers, large	30
do. small	30
Gimblets, spike	40
do. common	20
Spun yarn, coils	12
Hambro' line, skeins	20
Hand hatchets	300
do. bills	500
Sledge hammers	20
Tallow, firkins	2
Grease, kegs	6
Chalk, a small quantity.	
Chest of tools, carpenters' . . .	2
Sand-bags, bushel	80,000
Broad-axes	60
Felling-axes	300
Miners' tools for 20 miners . . .	

Levels with lines and bobs . . .	6
Smiths tools for 10 smiths	
Forge carts complete	2
Steel, cwts.	2
Coals, chaldrons	1
Nails, of sizes	20,000
Planes, of sorts	6
Gouges	20
Augers, of sizes	20
Compasses, pairs	20
Chalk lines, with reels	10
Box rulers, 2 feet	20
Oil stones	6

Wood squares	10
do. levels	10
Iron squares	5
Ballast baskets	100
Hand-crow levers, 6 feet . . .	10
do. 5½ do.	10
Tents, complete, for officers .	10
do. for men	10
Fascine choakers	12
do. mallets	40
Scaling ladders, joints . . .	36
Dark-lanterns	12
White rope coils, 2½-inch . .	2

Mr. Pink was further directed to cause to be ferried across to Aldea Gallega the undermentioned articles, to be immediately transported on cars to Elvas.

Hand hatchets	300
Hand bills	500
Fascine choakers	12
Hand saws	30
Spun yarn, coils	12
Felling axes	300

This latter proportion of tools was for the purpose of enabling the Portuguese garrison to prepare fascines, gabions, splinter-proof timbers, &c.; and Captain Macleod was ordered to Elvas to superintend the work.

In December, 1811, Lord Wellington, looking forward to this siege, and desirous of having the means of crossing the Guadiana at any required moment, issued

the following instructions for a bridge apparatus to be collected at Abrantes.

Memorandum for the Commissary General, and the Chief Engineer.

FRENADA, Dec. 25th, 1811.

Twenty-four of the pontoons of the small size, with their carriages and equipments complete, must be sent up the Tagus in boats to Abrantes.

The commissary general is requested to bear in mind, that three brigades of bullocks will be required to draw this bridge equipage forward.

The chief engineer is requested to order an officer to attend this equipage; and a sufficient proportion of the establishment of artificers attached to the pontoons, and he will report what proportion of watermen it would be convenient to have attached to it.

W.

In furtherance of these instructions, an order was the same day sent to Lieutenant Piper, R. E., at Lisbon, to take the pontoon train under his charge.

The number of Portuguese seamen to be attached to the train was fixed at twelve, and by an order, dated the 21st February, they were directed to be paid at the rate of sixteen vintems per day, and to have the same rations as British soldiers.

NOTE 14.

THE following are the details of the movements of the heavy artillery and siege stores.

31st January.

Major Tulloch, commanding the Portuguese artillery at Elvas, received orders to examine the resources of that garrison, and found available for the meditated siege,

English iron 24-prs. George II.	4
do. do. 18 do.	2
24-pounder round shot	10,000
18 do. do.	from 3 to 4,000
Barrels of English powder	3,500

There were also 16 Portuguese iron 24-pounders, and 5 Portuguese iron 18-pounders, but it was deemed better not to appropriate them to this service, in order to avoid complication of ammunition, on account of the difference of calibre.

8th February.

The transports with the 16 24-pounders, English battering guns, and a full proportion of artillery stores and ammunition, anchored in the harbour of Setuval; also transports with the proportion of engineers' stores and tools, detailed in the preceding Note. Captain Gipps, charged with forwarding the latter, also arrived.

10th February.

Major Dickson reached Setuval from Elvas, and the same day a company of British artillery, under Captain

NOTE 14.

money, joined from Lisbon, and the transhipment of
train and stores into boats immediately commenced.

11th February.

It being reported to Major Dickson that the 18-
pounder guns, which Admiral Berkeley had undertaken
supply for the siege, were Russian guns, equal to 30-
pounders of English calibre, and consequently far too
heavy for the English shot, he went to Lisbon, and made
every endeavour to have this appropriation changed ;
but without success, it not being considered advisable to
transfer any part of the armament of the *Barfleur*, 98 guns,
which was the only ship in the Tagus having 18-
pounders.

As the English shot would answer very badly for
the Russian guns, arrangements were in consequence
made for sending to Setuval all the largest of the
18-pounder Portuguese shot from the arsenal at Lisbon.
A good supply was thus obtained ; but many thousands
were obliged to be rejected, being far too low.

12th February.

A detachment of 160 Portuguese artillery joined at
Setuval from Lisbon.

14th February.

The first division of loaded boats proceeded up the
river Caldao from Setuval to Alcacer do Sal under Cap-
tains Dansey and Cox.

15th February.

The second division followed.

Fourteen of the Russian 18-pounder guns arrived at Setuval from Lisbon.

16th February.

The last of the 24-pounder guns and the engineers' stores left Setuval.

18th February.

The fourteen Russian 18-pounders and 10,000 18-pounder shot sent off from Setuval.

Alcacer-do-Sal, between 15th and 26th February.

From the moment of the arrival of the first division of guns and stores at Alcacer, all the artificers were kept employed in fitting poles to the gun carriages, repairing block carriages, fitting sling carts for bullock draft, and making frames to keep the shot from rolling off the bullock cars.

During this period the remaining six 18-pounder Russian guns, with a considerable quantity of shot, arrived at Alcacer do Sal from Lisbon, viâ Setuval; and convoys of cars, mules and asses, were dispatched for Elvas as fast as animals could be obtained, laden with ammunition and stores.

26th February.

A division of sixteen 24-pounders marched for Elvas under Captain Cox.

27th February.

Ten Russian 18-pounders marched for Elvas.

A company of Portuguese artillery joined at Alcacer to assist in bringing forward the train.

NOTE 14.

28th February.

The remaining ten Russian 10-pounders marched for us.

2d March.

Admiral Berkeley having written to say he was about send to Setuval ten English 8 foot 18-pounders which had arrived at Lisbon in the Nyaden, Lord Welton ordered every exertion to be made to bring them from thence to Elvas. These guns, however, having reached Estremoz at the commencement of the siege, when every animal was required for its immediate use, were never brought farther forward.

6th and 7th March.

The operation of sending off ammunition and stores of all sorts, was continued with the greatest activity, in consequence of the successful exertion made by Assistant Commissary General Laidlow, to furnish animals. The asses, of which great numbers were employed, were found very useful in conveying shot; for, although the loads they carried were very small, they made long marches and returned with great expedition, scarcely sustaining any casualty.

8th March.

The last division of guns reached Elvas, and the whole were parked on the glacis, viz.

24-pounders, iron	16
18-pounders, do.	20
24-pounders, do. howitzers	16
	<hr/>
	52

10th March.

The whole of the Engineers' tools and stores, and the platforms for the siege, were deposited on the glacis of Elvas. The 22 pontoons and the large Spanish boats, were also parked at the same spot.

11th and 12th March.

Every animal that could be procured was employed to bring splinter-proof timbers, fascines and gabions, from the woods to the park on the glacis.

13th March.

The commanding engineer fixed on the precise spots for putting down the permanent and flying bridges. They were very nearly the same as at the former siege.

14th March.

Lieutenant Piper marched with the bridge equipment, having under his orders Mr. Packenham, foreman of bridges, and a party of troops of the line, to act as pontooneers, in addition to the Portuguese seamen.

15th March.

The entrenching tools, sand-bags, &c., were divided into proportions, to be brought forward as means presented themselves; and, this afternoon, the first proportion was loaded on 135 bullock cars, in readiness to move in the morning, and 500 gabions were laid out to be carried by men.

16th March.

This morning the stores were put in movement at

NOTE 14.

by night, attended by the companies of royal military engineers; but only 120 pair of bullocks and their drivers were forthcoming, although every precaution had been adopted to keep them in view throughout the night. It would appear that the Portuguese attach no value to their cars in comparison with their animals, as invariably, on every opportunity, they slipped their bullocks out of the yoke and fled with them, leaving their cars to their fate on the road or in the dépôt.

17th March.

Major Holcombe marched from Elvas to the bridge with eight 24-pounders, ten 18-pounders, and eight 24-pounder iron howitzers.

The first proportion of stores and tools being deposited in the park before Badajoz, the cars were sent back to Elvas, guarded by 20 sappers, to bring forward the second proportion.

18th March.

The remainder of the heavy ordnance moved from Elvas to the bridge under Captain Rettberg.

19th March.

Late in the evening a second proportion of stores reached the engineers' park on 80 cars, being chiefly platforms, splinter-proof timbers and sand-bags, with a few fascines.

Every animal now left to the department was ordered to be kept steadily at work to bring forward to the park further numbers of fascines and gabions. The quantity, however, thus added to the original supply, was but small, as the cars, hourly diminished in numbers, and in

three or four days were all taken away for the service of the commissariat, or to aid in bringing forward shot.

The mules of the field-depôt, not required for rationing the parties, were, however, kept constantly at work to bring brushwood to the park, which was immediately made up into fascines and gabions.

21st March.

Mr. Packenham, who had been left in charge of the bridge, reported, that it began to be seriously injured by the swelling of the river and force of the current. In consequence, Lieutenant Piper was ordered back to resume the charge of the communication.

22d March.

The following memorandum was forwarded to Lieutenant Piper.

Memorandum, March 22d, 1812.

1.—The pontoon bridge to be taken up, and brought to this side of the river. A report to be made as soon as possible of the damage received, and inform Lieutenant Piper that * * * * *

2.—The stage on the right of the river for the flying bridge to be replaced as soon as possible. That part of the stage on the left of the river which is not necessary, to be taken up.

3.—At all events the planks on both stages to be taken up during the night.

4.—Mr. Piper to report whether it will be necessary to place pontoons on each side of the river to communicate with the flying bridge.

W.

In the afternoon a report was received that the fixed bridge, formed of the English tin pontoons, had been carried completely under by the current; that the temporary stages erected on the banks were partly washed away, the tackle of the flying bridge broken, and the passage of supplies of every nature suspended.

23d and 24th March.

The river continued to rise, and the passage remained suspended.

25th March.

Lieutenant Piper reported, that the water in the Guadiana was falling, and that two of the pontoons had been recovered in a damaged state, but that ten still remained invisible at the bottom of the river.

Two additional country boats, brought from Abrantes, were conveyed to the river side, with the view to form a second flying bridge.

26th March.

The report this morning was, that the force of the current had considerably abated, and Lord Wellington issued the following memorandum to regulate the passage, which was not again interrupted during the siege.

Memorandum, March 26th, 1812, for the Chief Engineer, Commanding Officer of Artillery, and Quarter-Master General.

Lieutenant Piper to be desired to employ six pontoons, as row boats, near the flying bridge, to carry over principally powder and shot.

Care must be taken that they are not overloaded; not

more than forty 24-lb. shot to be put in each, or an equal quantity of powder.

Plank must be placed in the bottom, and the lower part of the sides should have a plank, in order to prevent the shot from rolling against them and making holes.

The pontoons must not be used as passage boats.

Mr. Piper to be requested to mention in his report, whether he has bullocks in sufficient numbers, and in good order, to move the bridge.

W.

NOTE 15.

THE Duke of Wellington was very desirous of directing the attack against one of the south fronts; but Sir R. Fletcher, on calculating the details, found it would require at least 30 pieces of ordnance, including mortars, beyond the number that could be made available for the operation, five or six times the number of gabions, and twenty times the quantity of timber and other materials, for which carriage was likely to be procured; and further, an additional number of well instructed miners as well as sappers.

On this point it should be stated, that Badajos is far more strongly fortified than Ciudad Rodrigo, and men who would be able to sap to the walls of the latter, would make but little advance towards the former, on account of its greater front of fire, its countermines, and the means it possesses in its covered-way and advanced works, to make successful sorties.

NOTE 15.

... soldiers of the line acting as sappers at these
... were too inexperienced for the nicer operations of the
... could not possibly, without the aid of miners,
... artillery of the place being utterly silenced, have
... on the crest of the covered-way.

... s, however, but justice to the brave men employed
... these sieges to state, that wherever success was to be
... gained by exertion, the qualities they possessed, (qual-
... above every thing valuable in sappers,) daring
... courage, and great zeal for the reputation of their division,
... 3d,) led them to persevere when ordinary soldiers
... could have been appalled.

The project of attack adopted will not stand the test
... criticism as a scientific operation; but it certainly pos-
... sessed great merit as a bold and well conceived experi-
... ment, to reduce, in an unusually short time, a considerable
... fortress, well armed and well countermined, by the
... agency of unskilful sappers, no miners, and such an
insufficient ordnance as 16 English 24-pounders and 20
Russian 18-pounders, for the howitzers used as siege
pieces only served to waste ammunition.—See Note 26.

NOTE 16.

THIS circumstance shows the necessity of investing a
place on all sides, as, otherwise, a skilful governor may
draw numberless resources from the territory open to
him, to impede the attack. Sieges, however, have fre-

quently been undertaken without fully investing the place, and even with the side open by which supplies could be most readily received, and the result has invariably been a very protracted or successful resistance. Ostend and Rochelle, in former times, are examples of defences prolonged for years, by means of succours received from the sea; and in the general war, at the beginning of last century, two very strong instances of the mischievous, and even fatal effects, of leaving the communications of a besieged town open on one side, can be pointed out. First, the siege of Verrua, by the Duc de Vendome in 1704, which, being invested only on the right of the Po, and having its communication open with the army of the Duke of Savoy on the left bank, resisted till the besiegers had expended all the means they had provided for the siege. They were then obliged to invest it entirely, and trust to famine, which ultimately caused its surrender. The second is that of the siege of the Citadel of Turin by the Duke de la Feuillade, in 1706, who, by committing a similar error to that of the Duc de Vendome at Verrua, of only investing the work on the left of the Po, and leaving its communications open on the right bank, wasted from the 13th May (broke ground the second June) to the 1st September in a most murderous siege, and then, being attacked in his lines, was beaten, and obliged to retire with the loss of all his artillery, stores, &c. In our own sieges we have the example of Flushing, which, could it have been invested by sea the day it was by land, would probably have immediately capitulated like Camp Veer; or, at all events, it might have been left to the blockade of a division, as there were scarcely any troops in it. The communication with Cadsand re-

maintained open for many days of the attack, and the French every night passed over the Scheldt troops and every nature of supply, and enabled General Monet to persevere in the defence.

Whilst the communications of a fortress remain open with an army in the field, to attack the fortress is to attack that army by a single front of fortification, for every man in his turn shares in the defence, and if the two armies be in any way on an equality in point of numbers, perseverance in such an attack must almost inevitably lead to the destruction of the assailants. They cannot obtain success till they have disabled a number of men nearly equal to themselves, and it is not to be supposed that can be effected without something like a similar return on the part of the defenders, who have the advantage of strength of position.

From the same principle it is, that small works in advance of a large fortress, with good and assured communications to them, such as Fort Kehl at Strasburgh, are enabled to make such long defences. To attack them is in the same way to attack the fortress itself by a single point, and with a fresh garrison daily relieved, and therefore should rarely be undertaken whilst any other point can be selected.

NOTE 17.

THE experience of these sieges shows that an exposed wall may be breached with certainty at distances from 500 to 700 yards, even when elevated more than 100 feet above the breaching battery; and it is believed, that in a case of extreme necessity, it would be justifiable to attempt to batter down an exposed wall, from any distance not exceeding 1,000 yards; but then the quantity of artillery must be considerable, and it will require from four to seven days firing, according to the number of guns in battery, and the period of day-light, to render a breach practicable.

In forming a breach from such distances, it is absolutely necessary to commence battering the wall at its very foot; for this distant fire does not admit of great precision, and the whole face of the wall intended to be brought down is struck throughout pretty equally, at every round fired from the battery. Consequently, the wall is never cut through in regular lines, as when battered from a distance of 50 or 60 yards, and brought down bodily; but the breach is formed by the bricks or stones which fall successively. Therefore, if the fire be not at first directed very low, the rubbish from the upper part quickly accumulates in front of the lower part of the wall, and it becomes covered and sheltered from the effect of the shot before it has received any considerable injury; in which case, the total quantity of stone, earth, and clay, brought down, seldom suffices to form a good road over the portion of the wall left standing untouched, which in some of these breaches was

found to exceed twelve feet in height. Many shot will, of course, in the endeavour to fire low down, strike the ditch, and be thrown away from want of elevation; but such loss is not to be put in comparison with the greater chance it affords of forming an easy breach.

The difference of breaches formed by commencing to batter at the foot of the wall, or at ten feet above that level, was particularly exemplified by the comparative effects of batteries No. 7 and 8, against the face of the bastion of Trinidad, and that of No. 9 against the flank of St. Maria, at the attack of Badajoz.

The breach in the face of La Trinidad, of which ten feet from the bottom of the escarp was covered by a low earthen counterguard, was steep, although the line of fire at which the artillery commenced to batter was as low as is recommended for making breaches, where a choice exists; but the breach in the flank of Santa Maria, (and also that in the curtain,) the escarps of

which being totally exposed were battered from the level of the ditch, were remarkably easy and good; the distance of the breaching batteries, in both cases, being nearly similar. As whilst forming breaches from such great distances, the fire of the batteries is necessarily suspended during the night, the garrison frequently attempt to clear away the rubbish, and did so at these sieges with considerable success; it is, therefore, very desirable that a constant discharge of grape or cannister shot should be kept up on the breach during the cessation from battering, and a liberal provision should invariably be made for that service, in the proportion of ammunition brought up at every siege.

The artillery practice at these sieges, compared with any thing we read of at prior operations, is altogether

extraordinary. The fact is, that iron guns had for many years past been gradually improving and obtaining a superiority over those made of brass, both as to capability of supporting severe firing and as to their accuracy in throwing shot, which was scarcely suspected till the experience of these sieges.

Brass guns were never able to support a heavier fire than 120 rounds in twenty-four hours,* and were rarely used to batter at distances exceeding 300 yards; whereas three times that number of rounds were fired with effect from three times the distance at St. Sebastian's, several consecutive days, without other injury to the guns than the enlargement of their vents; which increased to an opening of an inch and inch and half in diameter, and it became necessary to make use of sand-bags in serving the vent, in order to load with security.

At Woolwich, iron 32 and 24-pounders have been fired (partly double-shotted) 10 rounds in 8 minutes, to the extent of 100 rounds each, without injury; and accurate practice has been made at 750 yards with 24-pounders which fired 200 rounds in 5 hours and 2 minutes.

With respect to the superior correctness of their shooting at long ranges, the facts of good breaches having been made from distances of 600, 700, and 800 yards, and lines having been accurately plunged into at 1500 yards distance, at these sieges, are irrefragable proofs.

This perfection does not appear to be owing to any change in the form of the machine, to give it increased strength or correctness of firing, or in the nature of its composition, but to have arisen solely from the progress

* In the defence of Gibraltar, an important battery, armed with very beautiful looking 24-pounders of brass, became nearly useless from drooping of the muzzle, after a few days of very moderate firing; and all the brass guns captured in St. Sebastian's were utterly unserviceable from the same cause, and the extreme enlargement of their vents.

made in the mechanical processes of refining the metal, forming the bore correctly, and casting the shot perfectly spherical.

Those who have known Woolwich for twenty or thirty years, must recollect the infinite varieties of guns which have been adopted into the service, each for the moment being regarded as a great improvement, and giving celebrity to its projector. One for its length—another for its weight—a third for its lightness—a fourth for its muzzle—and a fifth for its breech:—till at length above a dozen natures of battering ordnance being registered in our arsenals, to perplex, burthen, and render our outfits inefficient, it is confessed by all, that the 24-pounder of the construction used before the war is the best piece of ordnance for almost every purpose of a heavy gun.

Nor is this increased strength and accuracy of fire confined to English iron ordnance, as the iron cannon cast at Liege, and in the Prussian provinces on the Rhine, are found to resist the most trying proofs on both these points. In a few years such improvement will be general, and must materially affect the attack and defence of fortresses.

Whilst on the subject of the increased force of siege ordnance, it may be as well to observe, that gunpowder has also most materially increased in strength, probably twofold, during the last fifty years, previously to which time all the sieges took place from which our received notions, with respect to defensive expedients, are founded; and consequently an officer must make great allowances on every head, in calculating the relative powers of the attack and defence at the present moment, compared with former periods.

NOTE 18.

To drive the garrison out of the lunette of St. Roque, was not necessary to the success of the operation, according to the plan laid down ; but if it could have been effected without much loss, it was very desirable, as then the dams retaining the water in the inundation might have been destroyed, and the water let off.

This would have admitted of a closer approach to the ramparts, and would have had a good effect on the feelings of the troops, who, looking no further than at the immediate object in their front, imagined the inundation to add greatly to the difficulties of storming the breaches. Besides, the water extending in the ditch of the place, in front of the main breach, as could be seen from the distant hills, made it a question how far the garrison might have been enabled, from the heavy rains which had fallen since the commencement of the siege, to form of it an impassable obstacle, which would have rendered an assault impracticable. The fire of the place, which continued as efficient as on the first day of the attack, the small number of gabions, and the general inexperience of the workmen, precluded all hope of pushing the sap in any moderate time sufficiently near to gain possession of the covered-way of the lunette ; and in consequence an attempt was ordered to be made, secretly, to blow down the batardeau crossing the ditch on its left flank, which was one of the principal dams to retain the inundation.

Plate X. Fig. 6. — To effect this, five barrels of

powder of 90 lbs. each were, for the sake of portability, emptied into two cases, and twenty sand-bags were filled with earth. The cases of powder were directed to be placed against the batardeau, and the sand-bags to be laid against the exterior of the cases. Twenty sappers were selected to carry the cases and bags, and thirty armed men to accompany and protect them. Lieutenants Stanway and W. Barney were charged with the undertaking. As soon as it became dark, they marched the party out of the right of the first parallel to the bed of the Rivillas, where they turned to their left, and having halted the covering party at a proper distance, proceeded with the powder to the batardeau; but could not place the cases against the masonry as directed, on account of a stream of water, occasioned by the late rains, which ran over the top of the batardeau with great violence; and from the circumstance of the garrison having supported the batardeau wall against the unusual pressure of the water by a bank of clay (*abc*) seven or eight feet in height, its exterior lying at a slope of fifty degrees. Lieutenant Stanway, however, put the cases (*c*) as near the batardeau as the overflowing of the water, and the slope of the supporting bank would admit; but did not bring the men forward with the bags to cover the cases, from the certainty of discovery, which would have rendered the attempt abortive, the sentries of the garrison placed on the bridge and in the rear of the lunette having already twice challenged, and once fired upon the men with the powder. Lieutenant Stanway, having lighted the slow match, retired. The water, or some other cause, extinguished the slow match, and after waiting beyond the time calculated for the explosion, he returned

and lighted it afresh. In due time the two cases of powder exploded almost simultaneously, when the garrison immediately opened a fire of musketry on the spot from various posts all round it.

After the reduction of the place it was apparent, that could the powder have been placed as intended against the foot of the wall (*b*), the destruction of the batardeau would have been accomplished; for the explosion, which was found to have acted against the revetement of the covered-way (a wall of the most solid construction, and built against a natural bank of earth), had made a considerable rent in it, and had even blown off some of the *dos d'ane* of the batardeau by its lateral effects. The sand-bags would probably have added but little to the effect of the explosion, as the quantity of powder (450 lbs.) had been calculated as sufficiently great to cause the destruction of the batardeau wall, without being confined: but as the direction in which loose powder acts is very uncertain, it was deemed right that some weight should be placed along the exterior of the cases, if practicable, to turn the action of the powder against the batardeau.

It was never intended permanently to occupy the lunette, but merely to dislodge the garrison from it, in order to be able to destroy the dams, lower the inundation, and draw off the water which had been introduced along the counterscarp wall of the main ditch in front of the breach forming in the right face of La Trinidad bastion.

NOTE 19.

THE artillery arrangements for the assault were—

Lieutenant Bourchier, with 20 gunners,

———— Weston do.

———— Goeben do.

———— Sinclair do.

under Captain Latham, to accompany the 4th, light, 3d, and 5th divisions, respectively, in readiness for any artillery service that might be required in the place.

Captain Gardiner's company to follow the column of the 3d division into the castle, and occupy the batteries of the castle bearing on Christoval.

Major Holcombe to man the fourteen 24-pounder howitzers in No. 12, as ordered in the general Memoranda.

Captain de Rettberg with his relief, to man the breaching and enfilading batteries.

Captain Latham was killed on the great breach. Lieutenant Goeben was severely wounded, whilst aiding to plant the ladders against the castle wall, and Major Tulloh was severely wounded, standing in the breaching battery.

The killed and wounded of the artillery during the siege (accidentally omitted page 227) were—

	Killed.			Wounded.		
	Officers.	Gunners.	Total.	Officers.	Gunners.	Total.
British	2	27	29	5	55	60
Portuguese	4	13	17	3	46	49
	6	40	46	8	101	109

Engineers' Arrangements.

Major Squire, director on duty, will retain the general charge in the trenches, and hold the brigades on duty in readiness for any operation which may be ordered.

Major Burgoyne, having under his orders Lieutenant Wells, will conduct the 3d division to their point of attack.

Captain Nicholas, having Lieutenant Emmett under his orders, will conduct the 4th division to the breach in the face of La Trinidad bastion, and to the breach just formed in the curtain.

Captain Williams, having Lieutenant de Salaberry under his orders, will conduct the light division to the breach in the flank of the bastion of Santa Maria.

Lieutenant Lascelles, having Lieutenant Melhuish under his orders, will conduct the 5th division to the low escarp wall next the Guadiana, beyond the bastion of St. Vicente.

Lieutenant Wright will conduct the storming party of the guard of the trenches into the rear of the lunette St. Roque.

These officers will immediately take charge of their parties of carpenters and miners, volunteers from the royal military artificers, or the men of the line doing duty with the department, who have been told off in the park to accompany the several assaulting columns. These men are furnished with the necessary axes, crow-bars, &c., to cut away any chevaux-de-frise, palisades, or other obstacles, upon or behind the breaches, which may prove too strong for the infantry to force over.

The ladders for the escalades will be found ready laid

NOTE 21.

NOTE 21.

ALL the ladders used this night were the ordinary ladders of the English mechanics, and were made during the course of the siege. There were twelve supplied for this escalade, and the same number for General Smith's. They were called 30 feet ladders, but some of the longest measured 32 feet, and three or four not more than 28 feet.

The experience of all the escalades in the Peninsula, leads to the belief that such description of ladder is the best that can be used. The greatest difficulty experienced, was to bring such unwieldy machines to the spot; but once there, they were raised readily enough, when not seriously opposed.

Had the jointed scaling ladders, supplied as an engineer store, been sufficiently strong for the purposes of an escalade, they could not have been put together under the fire and missiles poured down on the assailants from the parapet on these occasions; and should any more perfect jointed ladders be substituted, it will always be found necessary to put them together before the garrison discover the party.

These unwieldy ladders travelled on cars many marches with the army; but they are so readily made when required, that it can seldom be worth the trouble of removing them from place to place. Their weight and strength were considered great advantages when once raised, as there were many hard struggles between those

above to throw over, and those below to support the ladders, which would have broken less solid machines.

It is believed, that the honour of raising and forcing up the first ladder on this occasion, attaches to Lieutenant Colonel Ridge in command of the 5th regiment, who met his fate on the castle wall.

NOTE 22.

THE following extracts, from the Orderly Book of the garrison and of the chief engineer, are inserted as being the authority for some of the statements in the Journals.

GENERAL PHILIPPON'S ORDERS.

Ordre du 26.

L'ennemi s'est rendu maître du fort Picurina hier dans la nuit après trois attaques de vive force: le general gouverneur ne peut attribuer cet evenement qu'au peu de sang froid des militaires qui defendaient ce fort, et qui ont oubliés qu'il fallait continuer à resister pour se couvrir de gloire et sauver leur existence

Une terreur panique, vraisemblablement, à paralysée le mouvement des bras qui devaient sans contredit, rejeter dans les fossés d'un ouvrage bien fermé, tout homme assez audacieux pour monter avec des echelles. Il n'y a pour cela qu'à se bien penetrer que lorsqu' un homme monte ainsi, il ne peut se servir de son arme que lorsqu'on le laisse parfaitement libre; sa tête paraissant toujours la premiere, il n'y a nulle doute qu'un militaire attentif doit

en detruire autant comme ils s'en presentent. Cette defense qui aurait du être tres glorieuse et causer une perte considerable à l'ennemi augmente au contraire son audace.

Le general gouverneur mettra sous les yeux de la brave garnison actuelle de Badajos les intrepides défenses du fort San Christoval pendant le dernier siège. Ce fort, qui avait deux brèches praticables, a avec 75 hommes resisté à 1600 hommes de troupes d'elite, qui ont fui, laissant leurs echelles dans les fossés et une très grande quantité de morts et de blessés.

La seconde attaque de ce même fort ne fut pas moins vigoureuse malgré qu'une partie des murailles etaient eboulées et les palisades brisées, donc il ne faut que de sang froid. La plus-part de messieurs les officiers de la garnison en sont bien pénétrés, la troupe doit y réfléchir.

La garnison de Badajos sera sauvée, nous ne pouvons en douter, mais il faut de l'energie, du courage, et de la bonne volonte ; avec cela elle se couvrira de gloire, honorera l'armée Francaise et ne sera point exposée à un esclavage qui est mille fois pis que la mort.

Il y a des braves dans la place qui ont été fait prisonniers par les Anglois. Ils ont du raconter à leurs camarades les maux qu'ils ont soufferts etant sur les pontons, mourant de faim, de soif, &c.

Le général gouverneur se fait un devoir de parler ainsi aux braves qu'ils gouverne, bien persuadé qu'ils sentiront la necessité de se defendre dans une circonstance où ils ont infiniment d'avantage sur leurs ennemis.

Enfin que chacun fasse son devoir, qu'il ne s'ecarte

point des principes de l'honneur que doit avoir tout militaire Français, et nous verrons tous, l'ennemi fuir devant nous après avoir arrosé les alentours de la place de son sang.

Déjà les colonnes Françaises qui doivent nous secourir s'avancent, or, les efforts de l'ennemi sont inutiles si chaque soldat s'arme de patience, et se pénètre bien de ses devoirs ;—bientôt nous aurons la jouissance de voir arriver les mêmes braves qu'il y a un an vinrent nous délivrer au moment où l'ennemi quoiqu'ayant fait trois brèches, pris la fuite honteusement.

A compter de ce soir à 8 heures toutes les troupes devront sortir de leurs quartiers pour se rendre chacun au poste qui lui est assigné ; l'intention du général gouverneur est que l'on couche sur les ramparts jusqu'à nouvel ordre pour prévenir les evenemens.

Ordre du 29.

Le Général Gouverneur s'empresse de témoigner sa grande satisfaction aux braves cannoniers qui ces jours ci ont écrasés les batteries de l'ennemi par leur feu, et lui ont fait éprouver une perte considérable.

Les tirailleurs sont aussi très dignes d'éloges ; ces braves gens inquietent si bien l'ennemi qu'il lui est impossible de travailler ni le jour ni la nuit. Le Sieur Stoll, caporal de Mineurs, a aussi fait hier un trait de bravoure bien digne d'être cité ; ce militaire à la nuit tombante a été déranger de place le cordeau que le génie ennemi avait placé le jour pour le travail de la nuit ;—Le Général Gouverneur a ordonné qu'il recevrait une récompense pécuniaire de 200 fr., et que sa belle conduite serait soumise à S. E. M. le Marshal Duc de Dalmatie.

Le bon esprit et le zèle de la garnison de Badajos degoutent l'ennemi qui jusqu'à présent n'a encore rien fait qui puisse nuire à la place.

Ordre du 2 Avril.

Copie d'une lettre écrite de Castuera près don Benito par M. le Comte D'Erlon à M. le Commissaire de Police de cette place le 28 du mois dernier.

M. LE COMMISSAIRE,

J'ai reçu votre lettre du 23 et je l'envoie de suite à M. le Marechal. J'ai écrit au Général Philippon; mais dans le cas où ma lettre ne lui serait point parvenue, dites lui que j'ai reçu la sienne, et que toutes les troupes sont en mouvement pour faire lever le siège.

Le Général Commandant l'Aile Droite,

(Signé) Comte D'ERLON.

Ordre du 4.

La brèche pouvant devenir praticable, le Général Gouverneur ordonne qu'elle sera défendue par 2 bataillons de troupes d'élite, composés de 4 compagnies de grenadiers, 4 de voltigeurs, afin, que la gloire de défendre les brèches soit partagée entre ces deux armes, plus les sapeurs et les mineurs. Le 1^{er} de ces bataillons sera commandés par M. Babot, chef de bataillon du 88^{me}, et le 2^d par M. Meister, chef de bataillon du regt. de Hesse; M. le Général Vieland est chargé de l'organisation des dits bataillons.

COLONEL LAMARRE'S ORDERS AND LETTERS.

Ordre du 19 Mars.

A 10 heures et demi précises les travailleurs rentreront

pour se préparer à une sortie ;—120 hommes pris dans les 3 compagnies du génie seront commandés pour cette sortie. M. le Capitaine Levoir et M. le Lieutenant Vallon, 4 sergens et 4 caporaux commanderont nos troupes dans cette sortie, et marcheront immédiatement après l'infanterie ; leur objet principal est de combler les tranchées faites par l'ennemi, et de ramasser les outils que l'ennemi pourrait laisser en se retirant : chaque outils sera payé un demi douro à toutes les troupes.

Il est défendu exprésemment à messieurs les officiers et aux troupes du génie de s'occuper d'autre objet que du comblement des tranchées. Cet article ne sera communiqué aux troupes qu'à 10 heures, et ils devront être rendu à 11 heures et demi précises à la porte de la Trinité.

Je pense qu'il ne faut pas perdre un instant pour organiser deux compagnies de bons tireurs bien payés pour faire un feu continuelle sur la tête de la sappe ennemie. En attendant cette disposition, quelques travailleurs ont été placés pour tirer pendant cette nuit.

Du 22 Mars.

Au Colonel d'Artillerie.

La mitraille que vous avez en approvisionnement ne porte pas sur les ouvrages de l'ennemi, d'après le dire des officiers d'artillerie, et cela vient de ce qu'elle est trop fine ;—je me rappelle que dans notre dernier siège, elle portait à une distance une fois plus éloignée que ne sont les ouvrages ennemis sous le château. Ne pourriez vous pas avec le plomb que vous avez en magasin ou avec celui que vous pourriez vous procurer en ville, en faire couler de suite, car à la distance où se trouve

l'ennemi sur quelques points, la mitraille doit faire un effet bien plus meurtrier que le boulet.

A M. le Chef de Bataillon d'Artillerie Lespagnol.

On vient de me faire le rapport que l'ennemi continuait sa parallèle vers la Guadiana sous le château ; il sera bien utile pour le contrarier de faire tirer quelques coups de grosse mitraille sur ce point ; la mitraille faisait un excellent effet pendant notre première défense, et l'ennemi était bien plus éloigné qu'il ne l'est à présent.

Du 30 Mars.

Au Général Gouverneur.

On a distribué des bombes, des boulets et des bois sur les remparts pour les précipiter sur les assaillans en cas d'attaque, mais je doute que l'on ait désigné des hommes pour y mettre le feu et les lancer à propos.

Il serait peut être nécessaire que vous vous fassiez rendre compte de la manière dont on a organisé ces moyens de défense. Les hommes que l'on doit employer pour lancer ces bombs doivent être intelligens et munis de tout ce qui leur est nécessaire pour operer utilement. Je pense que l'on pourrait employer les mineurs et sapeurs qui ne sont point de service, et de les faire venir quelques fois sur les lieux, pour donner à chacun d'eux les explications sur l'objet de leur emploi.

Du 1 Avril.

A M. le Commandant d'Armes.

J'ai besoin de 100 hommes d'infanterie pour debayer la brèche et commencer ce travail aussitôt la nuit tombante ;—Veuillez donner vos ordres pour que ce nombre

soit rendu à 6 heures précises sur la place Saint Jean. Je les demande de meilleur heure que les autres afin de ne pas perdre un instant et de ménager les hommes ; il est nécessaire que ces travailleurs soient commandés par deux officiers et deux sergens. L'officier du Genie chargé de ce travail sera rendu à 6 heures précises sur la place Saint Jean pour y prendre ces ouvriers.

Note sur la Disposition des Troupes pour la Defense de la Brèche.

Cinquante hommes de troupe d'élite avec au moins un fusil de rechange commandés par un bon officier et un sergent devront rester dans le petit réduit entre les bastions 6 et 7 ; 25 hommes commandés par un bon officier seront placés au saillant du chemin couvert du bastion de la Trinité ; 50 hommes commandés par un bon officier et un sergent devront être à la face gauche et à la place d'armes de gauche du chemin couvert du front 5 et 6. Ces troupes doivent avoir l'ordre de tenir dans ces ouvrages et d'y mourir s'il le faut. Ces postes qui sont les plus périlleux doivent être confiés à des officiers dévoués aux quels on puisse donner des récompenses. Indépendamment de cette distribution, il faut du monde dans le bastion 7, au long de la courtine 6 et 7, et dans le bastion 6. Les troupes qu'on y logera devront être choisies ainsi que les officiers ; car sans contredire, c'est le point le plus essentiel à défendre.

Les troupes qui s'y trouveront sur les remparts ne doivent diriger leurs feux que dans les intervalles qui resteront entre les trois détachemens que doivent tirer du chemin couvert, à moins qu'ils ne soient renversés par les

assaillans. Le restant de la garnison peut continuer d'être distribué suivant l'ordre qui a été donné.

Du 2 Avril, 1812.

Au General Gouverneur.

J'ai visité le bastion No. 7, que l'on bat en brèche, et je pense que nous devons nous attendre à voir tomber incessamment le parapet de ce bastion. Il faut que nous soyons en mesure de faire un artificiel une demi-heure après ou bien aussitôt la nuit tombante : ce parapet ne peut être fait que de pièces de bois, ballots de laine et sacs à terre. Je donne l'ordre à l'officier du génie de service de faire remplir deux ou trois mille sacs à terre et les mettre en reserve,—il faut que l'artillerie de son côté fournisse des ballots de laine, et que l'officier d'artillerie de ce bastion de concert avec l'officier du génie de service fasse faire ce nouveau parapet lorsqu'il y aura lieu ; mais il faut que vous ayez la bonté de donner des ordres en

consequence à l'artillerie. Il n'est pas moins urgent, mon général, de designer les troupes qui doivent défendre la brèche, car c'est du lieu même ou nous referons ce nouveau parapet, que doivent partir les feux les plus terribles de mousqueterie contre les assaillans ; il faut aussi qu'on ait des bombes de 14 pouces de préparées sur ce parapet et des hommes intelligens pour les lancer à propos. Il seroit bon que vous leur parlassiez pour les inflammer, et que vous pussiez juger par vous même s'ils sont en état de remplir le but que l'on se propose. J'en trouverai quelques uns parmi les troupes du génie.

Il reste une pièce de canon sur le terreplein de la face droite de ce bastion, il faut qu'on l'enleve ou qu'on la culbute de son affut pour que l'ennemi ne puisse pas en

faire usage contre nous, s'il venoit à s'emparer du bastion : — Cette mesure me paraît pressante, on aurait du aussi enlever les mortiers pour les placer en arriere des coupures que j'ai fait faire dans ce bastion. Il ne faut pas non plus qu'on conserve plus de poudre dans ce bastion qu'on ne doit en consommer dans 12 heures, on est toujours libre de l'approvisionner.

Ordre.

Les travailleurs se releveront par moitié de manière a travailler avec le plus d'activité possible ; — s'il n'y avait pas assez d'ouvriers on fournirait du 58^{me} regiment le supplement nécessaire. — Ces travailleurs recevront l'eau-de-vie de gratification extraordinaire et seront payés généreusement. Il faut que le déblai des brèches soit fait à tout prix et qu'au jour on y trouve pas une pierre de décombres au pied. Il sera fait une coupure dans le fossé à l'angle de l'épaule de la face droite du bastion battu en brèche qui sera dirigé vers l'extrémité de la gorge de la contregarde de manière á empêcher que l'ennemi ne parvienne au pied de la brèche après avoir descendu la contrescarpe.

Du 3 Avril, 1812.

An General de Division Gouverneur.

Je vous prie d'avoir la bonté de donner des ordres pour que les travailleurs au nombre de 200 qui doivent déblayer les brèches soient rendus à 6 heures et demi précises sur la place Saint Jean. Il est nécessaire qu'ils soient rendus aux brèches à la nuit tombante afin de ne pas perdre un instant pour les déblayer. Le 28^{me} et 103^{me} doivent marcher cette nuit pour cet opération, et après eux ce sont les Hessois. Il faut au moins trois officiers pour les commander et il serait bien avantageux

d'y faire transporter de l'eau-de-vie pour encourager les travailleurs.

L'ennemi pouvant tenter une attaque cette nuit vu que les brèches seront à peu près praticables il est essentiel de pourvoir ces travailleurs de cartouches.

La brèche paraissant devenir praticable, les troupes du génie doivent concourir à la défendre, en conséquence tous les mineurs et sapeurs qui ne feront point partie du tiers qui doit être au travail, même le détachement de la 5^{me} compagnie devront être en permanence avec les troupes d'élite sur la brèche. M. le chef de bataillon Barbot du 28^{me} qui a le commandement de ces troupes leur donnera ses ordres. Les officiers des troupes du génie se tiendront avec leur compagnies.

Si l'assaut a lieu pendant que les travailleurs déblayeront la brèche l'officier du génie se retirera avec les travailleurs dans la contregarde du bastion 7, battu en brèche ainsi que dans le réduit en avant de la courtine 6 et 7. Ils doivent maintenir la plus grande silence et attendre que l'ennemi soit à bout portant pour l'anéantir par leur feu.

Du 4 Avril.

Instruction pour le parapet artificiel du bastion No. 7.

Il faut continuer de perfectionner le parapet artificiel en arrière de la brèche, faire attention de ne pas élever la crête intérieure au-dessus des dimensions d'un parapet ordinaire, de manière que les défenseurs puissent faire feu sur les assaillans, et lui donner la plus d'épaisseur qu'il sera possible.

Il faut encore faire pour la coupure de droite du bastion No. 7 ce que vous ferez pour celle de gauche ; c'est-à-dire achever les fossés, former les crêtes intérieures avec

un rang de sacs-à-terre ; cette coupure doit également être appuyée par sa droite contre le parapet, et pour que l'ennemi ne puisse pas tourner ce retranchement par le parapet, il faut avoir des chevaux-de-frise prêts vers cette coupure pour les placer sur ce parapet au besoin. Ayez bien soin de mettre ces chevaux-de-frise à couvert de manière à ne point les laisser briser par le canon.

Il n'est pas moins nécessaire de continuer le parapet artificiel derrière le bastion No. 6 avec les memes conditions que pour celui du bastion No. 7.

Les fossés du retranchement sont assez profonds il faut s'attacher maintenant à former les crêtes interieurs des parapets de manière à pouvoir y placer des troupes aujourd'hui ; il faut aussi que les maçons achevent de créneler les murs ou l'on a indiqué des creneaux.

Le déblai des brèches étant très périlleux et produisant peu d'effèt, je pense, mon General, qu'il faut se dispenser cette nuit d'y travailler. Les retranchemens sont aussi très avancés et peuvent dans l'état où ils sont être défendus ; si vous le jugez convenable nous n'aurons point de travail de nuit, et tous les troupes seront disponibles pour repousser les attaques. Les troupes d'élite qui sont chargées de défendre les brèches ont travaillées la nuit dernière de bonne volonté, j'ose croire qu'elle le feront encore la nuit prochaine et elles suffiront.

Les fermetures du château seront également continuées au moyen de maçonnerie en terre, et l'on mettra une porte de plus à chaque issue qui seront disposées comme celles qu'on a déjà placées.—On les percera de quelques créneaux s'il est possible.

Ordre du 5 Avril.

Les troupes du génie seront chargées de défendre les brèches avec les troupes d'élite de la garnison : M. le Lieutenant Mailhet et la compagnie des mineurs qu'il commande seront sous les ordres de M. le chef de bataillon Mettre à la brèche du bastion No. 6 ; MM. les Lieutenants Lepard et Vallon avec les sapeurs à leurs ordres seront à la disposition de M. le chef de bataillon Barbot du 88^m à la brèche du bastion No. 7. Ces officiers se rendront avec leurs détachemens à 6 heures et demi précises aux dits bastions, et se présenteront à ces chefs pour prendre leurs ordres ;—ils ne quitteront les brèches qu'après en avoir reçu l'autorisation. Il faudra qu'ils désignent des hommes pour placer les chevaux-de-frise et prêter la main à l'artillerie pour tous les travaux que tiennent à l'artifice.

100 fusils de rechange seront mis à la disposition des troupes du génie, et l'adjutant les fera prendre de suite chez le commandant de la place.

Il sera établi un chapelet de bombes de 14 poudres au long de la contrescarpe du front battu en brèche, depuis la fin de l'inondation jusqu'au saillant du bastion No. 6. On y communiquera le feu au moyen de saucisson que l'on garantira de l'humidité par des augets faites en tuiles.

Du 6 Avril, 1812.

Au General Gouverneur.

L'ennemi paraît commencer encore une nouvelle batterie à très petite distance pour battre la face droite du bastion No. 8, pour le retarder dans ce travail il serait utile de faire tirer de quelques points de la place quelques pièces de petit calibre ; il n'est pas encore

bien couvert et la consommation de poudre que l'on ferait pour l'inquiéter serait la mieux employée pour le moment, car les coups de canons que nous tirons ailleurs produisent peu d'effèt; il n'y a pas de doute que cette batterie sera retardée d'un jour si l'on veut tirer dessus.

Depuis trois jours il'y a une pièce de 4 allongée qui est hors de son affut et qui était destinée à flanquer le retranchement; je vous prie, mon general, de donner des ordres pour la faire mettre en batterie, cette pièce pouvant être d'un tres grand utilité.

Supplement à l'Ordre du 5.

100 hommes l'infanterie et un sergent du genie seront employés apres midi à approfondir la cunette de la face gauche du bastion No. 1, les terres seront jettées du coté de la place. M. le Capitaine de Genie Meynhardt donnera ce travail à la toise.

Du 6 Avril, 1812.

Au General Gouverneur.

On pourrait encore opposer un obstacle à l'ennemi pour l'empêcher de monter à la brèche, en faisant une ligne de voitures de l'artillerie dans le fossé en avant de la brèche du bastion No. 6, depuis les barrières jusqu'au saillant de ce bastion: je pense, mon general, que vous gouteriez cette idée. L'artillerie peut encore aujourd'hui mener toutes ces voitures dans le fossé et elle pourra les y introduire en les sortant par la porte de la Palma, leur faire parcourir le glacis et les faire introduire dans les fossés par le petit pont qui communique à Par-daleras que nous avons detruit mais sur lequel on peut mettre dans un instant des madriers pour former la

NOTE 22.

sage ; ce nouvel obstacle avec le chapelet de bombes sera établi avant la nuit, le sang froid et le courage des troupes devront infailliblement repousser les efforts de l'ennemi.

J'ai l'honneur de vous rendre compte que le château est fermé ce soir, que des magasins sont disposés pour recevoir des vivres et qu'il existe plusieurs citernes avec de la très bonne eau et en assez grande quantité. En conséquence je pense qu'il faut que vous ayez la bonté d'ordonner des ordres de suite pour faire un approvisionnement de biscuit, d'eau-de-vie, de bois et de viande salée ; on pourrait aussi y introduire tous les soirs une partie du nouveau : je pourrai de mon côté à tout ce qui tient à mon service ; mais il n'y a pas un instant à perdre pour que le commissaire des guerres et l'artillerie préparent tout ce qui est relatif à leur partie ; il faut que les officiers de santé se pourvoyent aussi de quelques effets de

pansement ; avec tous ces moyens nous serons encore à même de tenir trois ou quatre jours dans le château : si nous étions réduit à cette extrémité nous aurions la consolation de donner l'exemple de la défense la plus héroïque et d'intéresser l'univers à notre sort.

Tant que le château tiendra San Christoval pourra tenir, il faut que ce fort soit également approvisionné, dans ce cas là la lunette Verley doit enclouer ses pièces et se retirer dans San Christoval. La tête de pont pourrait en faire autant ; avec des signaux et un porte voix vous pourrez leur communiquer vos ordres ; mais il faut que la garnison de ce fort se procure de l'eau ; elle a des jarres en assez grande quantité.

Supplément à l'Ordre du 6.

M. le Lieutenant Mailhet avec un détachement des

troupes du genie et un d'infanterie fera construire un petit parapet artificiel derriere la 3me brèche pratiquée dans l'angle rentrant de la courtine et du flanc droit du bastion No. 7. Ces travailleurs seront pris de bonne volonté parmi les gardes des brèches.

NOTE 23.

THE conduct of the troops at these sieges, whenever required to storm, to use their bayonets, or remain exposed to severe fire, demands a meed of unmeasured praise; for never did they display more gallantry or more firmness than on those occasions: but, in the performance of the laborious duties of the trenches, requiring zealous and persevering labour, watchful attention, and a patient endurance of fatigue, commendation must be withheld.

At this siege, the men, fatigued with the exertions of a campaign which had been incessantly active for nine months, and disheartened by the little support they were receiving from the batteries, laboured with absolute reluctance. Their want of exertion, compared with that of the garrison, was clearly seen by all the staff of the army.

A hill, used as a look-out, commanded a full view of the interior of the castle and of the besiegers' approaches. In the trenches, a working party of 300 men was seen excavating the lower parallel, and immediately in front of them in the castle, a party of about 100 men throwing up an interior retrenchment. The shovels full of earth thrown up by the 300 besiegers were

NOTE 23.

as to be readily counted, whilst from the 100 men in the castle the quantity rising was incessant. Their work was completed in 36 hours: the third day witnessed the besiegers' shovels lazily rising one after another from the same spot.*

Continued exertion amongst large bodies of troops, particularly during night, can only be induced by the unremitting vigilance and superintendence of the officers of every rank; and, to ensure this, it is necessary that the commanding officer in the trenches, and subordinate to him every senior officer of a detachment, should be made responsible for a certain quantity of labour to be performed, and no relief of any party should be permitted till an assigned task had been completed.

The following general orders were issued on this subject.

O.

ADJUTANT GENERAL'S OFFICE,
VILLA TORO, 1st Oct. 1812.

1. The Commander of the forces is concerned to state, that the working parties in the trenches do not perform their duty, notwithstanding the pains which have been taken to relieve them every six hours.

2. He desires that Lieutenant Colonel Burgoyne will report to him every morning, who commanded the working parties in the trenches during the preceding twenty-four hours, and whether each of the parties performed the work allotted to it with due diligence."

* Since the above was written in 1813, two reasons have been suggested to reconcile this difference. First, that men working for self-preservation, and to avoid capture and imprisonment, will naturally feel more interested, and use more exertion to complete any task assigned to them, than men merely labouring on an ordinary tour of duty, for a certain number of hours. Secondly, that the French shovels, being made expressly for the facility of field-carriage, are little more than half the size and weight of the British shovels.

" G. O.

ADJUTANT GENERAL'S OFFICE,
VILLA TORO, 3d Oct. 1812.

1. The Commander of the forces noticed in General Orders on the 1st inst. the complaints he had received of the working parties, and he is concerned to have again to notice, that he has received complaints of the working parties ordered for last night.

2. The whole of the working parties ordered for the trenches, from Brigadier General Pack's and Brigadier General Bradford's brigades, from 6 to 12 o'clock last night absented themselves from the trenches.

3. The Commander of the forces desires that ——— and ————— may be put in arrest, and the non-commissioned officers and soldiers composing these parties from General Pack's and General Bradford's brigades may be employed at working parties for six hours during the twenty-four hours of the next four days, and that, during the remainder of the twenty-four hours of the same four days, they may be kept at their arms in front of the encampment fully accoutred, and in readiness to turn out at a moment's warning.

4. The Commander of the forces is concerned likewise to have to notice, that the working party ordered last night for the commanding officer of artillery did not perform their duty.

5. All the officers, and the whole of the Portuguese detachments absented themselves, and of course, when such an example was set by the officers, much was not to be expected from the soldiers.

6. The following officers are to be put in arrest for quitting their duty without leave, on the night of the 2d inst. viz.

* * * * *

NOTE 23.

7. At the same time that the Commander of the forces notices this misconduct of the working parties, he is sorry to make an exception in favour of the Guards, who, he is informed, have invariably performed this duty, they have every other, in the most exemplary manner.

8. The officers and soldiers of the army should know, that to work during a siege is as much part of their duty as it is to engage the enemy in the field; and they may depend upon it, that unless they perform the work allotted to them with due diligence, they cannot acquire the honour which their comrades have acquired in former sieges.

9. The siege of the Castle of Burgos has afforded more than one instance of the fatal effects of the omission of the working parties to perform their duty. And the Commander of the forces hopes that he shall have no reason to complain of any in future."

NOTE 24.

THE guard of the trenches generally at these sieges, but more particularly at this attack, fired much too rapidly, and too indiscriminately at all points of the defences; and the consequence was, an excessive expenditure of musket ammunition.

It is so natural for troops to fire before them without consideration, that the musketry of the guard of the trenches can only be rendered effectual through the

utmost attention and vigilance on the part of the officers. They should select out the best shots, and see that they are well covered with sand-bags, placed on the top of the parapet, with an opening between them, just sufficient for their musket barrels, and should explain to the men the object of their being so posted, and caution them only to fire when a probable chance of success should present itself. The remainder of the guard should be kept seated on the banquette under cover, in readiness to receive and repel sorties. Any general fire of the guard of the trenches cannot be otherwise than wasteful and ineffectual.

The French certainly at this siege acted most strictly on these principles, for the men of their firing parties were invariably posted behind good cover, and never for a moment exposed themselves to view; and they must have been selected marksmen, for every gabion placed by the full sap, was pierced by at least twenty bullets, although apparently the fire on the head of the sap was not very great.

During the early periods of this siege, a single Frenchman, who took an unerring aim, killed or wounded an extraordinary number of the besiegers. He remained patiently concealed for hours together behind the stockade, used as a flank to the outer wall, with the muzzle of his piece directed on the sap, through an opening in the palisades. His companions by lifting up a hat, throwing over stones, or making a great noise, used at intervals to draw the attention of the workmen or guard to a different part of the wall, when they too frequently forgot the fatal musket, exposed themselves to view, and were invariably shot.

The deficiency of musket ammunition, which paralyzed the efforts of the besiegers at this period, called forth the following general order.

" G. O.

ADJUTANT GENERAL'S OFFICE,
VILLA DE TORO, 27th Sept. 1812.

1. From the quantity of musket ammunition called for by the several divisions since the commencement of the siege of the castle of Burgos, the Commander of the forces is persuaded that his orders on this subject have not been obeyed.

2. These orders prescribed, that the officers commanding companies shall inspect the ammunition of every soldier in his company, at every parade, and see that it is complete. The object of these orders is to prevent waste, the sale of ammunition, and that requisitions may be made on the stores at the moment any deficiency occurs.

3. The stores of musket ammunition are necessarily limited, and the state of them is founded upon the certainty, that every soldier in the ranks has at all times in his possession 60 rounds: but this certainty cannot exist, and the stores must be insufficient, if the officers commanding companies neglect their duty, and do not inspect their ammunition at every parade, according to orders; and the consequence is, as happened in a late instance, that before the soldiers are engaged for five minutes, ammunition is wanting, and the stores are unnecessarily exhausted at a great distance from all means of supplying them."

NOTE 25.

THESE sieges furnish examples of two very different modes of assaulting breaches, and escalading works. It may therefore be instructive to discuss their respective merits.

The storming of the breaches at Ciudad Rodrigo and Badajos, the escalades of the latter place by the 3d and 5th divisions, the assault of fort Picurina, the storming of fort Napoleon at Almaraz, the assault of the breaches in the outer line at Burgos, on the 4th October, and the storming of the hornwork at the same place, were all executed by strong columns of men, pushing forward at the same moment, and with the exception of the breaches at Badajos, (the cause of the failure of carrying which has been shown to be foreign to this inquiry,) they all succeeded.

The escalades of the outer line at Burgos, on the 22d September, and the general assault of the second line at the same place, were undertaken by small parties, and on the principle of advancing by successive detachments, and they both failed.

To this principle of advancing in detachments, intended closely to support each other, may also in some degree be traced the failure of the first assault of the breaches at St. Sebastian.

Success, therefore, speaks in favour of the first method of attacking with strong columns, pushing forward as one body.

The arguments generally advanced in favour of the

cing openly to the assault of a place prepared for defence. The evening was sufficiently clear for the defenders of the hornwork to see the parties advancing, and though neither had more than 150 yards to march, the one was nearly annihilated, and the other lost half its numbers.

The most preferable time for such open advances is at the moment of day-break. In the dark the troops are liable to imaginary terrors, and being concealed from the view of their officers, the bravest only do their duty. The British soldier is particularly apprehensive of the explosion of mines and combustibles, of which the French make great use. In the dark these have a very appalling effect, but day-light deprives them of nearly all their terrors.

Do not permit the mind of the British soldier to be cast down by ideas of imaginary danger, and his natural intrepidity will always lead him to face real danger in the person of his antagonist. A ridiculous instance of this occurred at the storming of **Badajos**, on the night of the 6th April. The troops under Major General Walker, after performing prodigies of valour in escalading a wall 31 feet in height, whilst pursuing their vanquished antagonists round the ramparts, were opposed by a single field-piece placed on the terre-plein of the curtain of the front 4, 5. On the approach of the British the gunner lighted a port-fire, which threw out a sudden blaze. A man amongst the foremost of the pursuers called out "a mine;" the word was re-echoed through the ranks—caused a panic—and the whole of these brave fellows immediately dispersed; such as could find a hole or corner creeping into it. The fugitive French then rallied, turned on their pursuers, and bayonneted them

back to the very bastion where they had forced in. Luckily, the battalion which last entered was there, formed in reserve, and steadily received the French with a volley and charge; the same men who had fled from the imaginary danger of a lighted port-fire, turning round, and showing the same intrepidity in again facing the enemy, as previously to their panic.

When it is decided to assault a place immediately before day-break, the utmost attention should be given on the previous morning to ascertain the exact moment of its becoming light; and the most energetic and decided measures must be taken to insure the columns advancing at the instant fixed upon, as it will be found equally prejudicial to their success to be too soon, as to be too late.

The error of advancing too soon was committed at the assault of St. Sebastian, on the 25th July, 1813. The advanced party reached the breach unperceived from the right of the attack, and, although some time engaged with the defenders, it was still too dark when they retired for the artillery in the batteries to distinguish objects sufficiently to aid the troops by their fire.

*Considerations on the usual mode of securing the Gorges
of Detached Works.*

Whilst on the subject of storming works, it may be as well to inquire, whether theory more than experience has not led to the practice of making the rear of all detached works in advance of a fortress without a ditch. Such a construction is often of serious ill consequences, as the assailants never fail to attack such a work at the

gorge, and generally succeed by it: therefore, if it be not founded on sound principles, it should be rectified.

The reasons urged against making a ditch round the gorge of detached works are, that it serves as a lodgment for the assailants after carrying the work, and that it is an obstacle to driving them out of it again by a sortie.

This reasoning certainly holds good when the work is not advanced beyond the glacis, as then it cannot very well be attacked at the gorge, and the enemy ought to be repeatedly driven out of it; besides, its proximity to the place renders the musketry fire upon it so destructive, as to make immediate cover for the assailants indispensably necessary for their safety. Works in such situations cannot be made too accessible at the gorge; but these considerations lose all their weight when applied to a work more advanced from the place than 500 yards, as then the chance of recovering it by a sortie is nearly hopeless, and any engineer of experience would, instead

of entering the work, prefer making a lodgment by the flying sap on its flank, as being more readily executed, and of the most use when finished. Any cover created within the work must necessarily be very confined, and the garrison always prepare marks to direct their artillery, and usually keep up a constant fire on a detached work throughout the night after it is carried.

The line to draw would therefore seem to be,—no ditch around the gorge of works within 300 yards of the place,—in the construction of works from 300 to 500 yards, to be governed by circumstances,—but to all works beyond 500 yards distant from the place, to make a ditch, and create the same obstacles to an assault round the rear as in front of the work.

The French plant admirable palisades in the ditches and rear of their works; each palisade is the rough stem of a young tree, or the half of a larger tree, fixed to a heavy beam four or five feet under the ground. To cut through these palisades, in their usually confined situations, is the work of half an hour, and to force them out is impossible, so firmly are they planted. They are, therefore, an excellent defence when covered from cannon, and might be adopted by the English in many situations with great advantage to the service.

For the better defence of thick parapets, the French also adopt an excellent expedient, which is, to make a cut two or three feet wide, parallel to the exterior line of the parapet, at about the same distance from it, with occasional communications from the rear. This cut enables the soldier effectively to use his bayonet, which is of no service to resist an escalade from behind a thick parapet, and also admits of his firing much more directly into the ditch, and with less exposure to himself. It is from these cuts the French throw down, with so much accuracy, the immense quantity of grenades and combustibles with which they always second their defensive efforts. From these advanced cuts they are able to drop them at the very foot of the ladders; whereas, from behind a thick parapet, the impetus the shell receives while rolling over its surface causes it to form a curve, during its descent, within which the assailants are secure. Such a cut, likewise, affords the means of forming a double line of defence. A few brave cool men are sufficient for the front line, and the main body can remain in reserve sheltered by the parapet. This disposition of the troops to sustain an assault cannot but tend to prevent that

general cessation of defensive efforts which too frequently occurs on a few of the assailants forcing in at some unguarded point. At Badajos, many French soldiers in these cuts, not aware that the body of the defenders had deserted the interior of the parapet, continued to fire into the ditch after the allies were in possession of the terre-plein.*

All these advantages were gained by the ancient chemins-des-rondes, with the additional benefit of adding to the height of the escarp, at a small expense, and rendering the breach more difficult to form, by the parapet being retired its whole breadth. As this addition to a front costs little, do the objections urged against it justify its omission in all modern fortresses; particularly when it is considered that Vauban, in his latter days, frequently expressed the greatest regret at having omitted it in the places he had fortified on his new system?

* Indeed, in the ardour and excitement of a determined resistance, brave men are frequently so occupied with their own efforts, as to be insensible to any thing passing at the smallest distance. At the assault of the lunette of St. Roque, which was carried by escalade at the gorge, whilst menaced and fired upon in front, the officer with the ladders (Lieutenant Wright) was obliged, on going round to the front faces, to strike several of the defenders with the flat part of his sword, to make them aware that the work was carried.

NOTE 26.

THE 5½-inch or 24-pounder iron howitzer, whatever may be its good qualities for field service, is, undoubtedly, the least adapted for a siege of all the natures of ordnance in use. Its value for battering may be esti-

mated from a statement of its charge being two lbs. of powder. The momentum such a charge imparts to a 24-pounder shot, whilst passing through a tube only 33 inches in length, is so trifling, that, when directed against a wall from a moderate distance, it bounds off without making any impression on the masonry. In an advanced battery it can scarcely be worked, from the destruction of the gunners, in consequence of the wide openings necessary to prevent its blowing away the embrasures; and, judging from the practice at Badajos, Salamanca and Burgos, it will not throw its shot with sufficient accuracy to enfilade a line of works at the distance of the first parallel. Such being its defects, unless it has some very superior properties for throwing spherical case, it should never be admitted into a battering train.

In estimating the efficient ordnance used at the sieges in Spain, these howitzers ought in fairness to be excluded from the calculation, as they did little more than waste invaluable ammunition.

NOTE 27.

THE advantages or disadvantages attending the attack of a place situated on a height are so little understood by officers in general, that it may be in some degree useful to discuss the real value of height of situation.

Every one must have observed, that there exists amongst all classes of men a sort of vague and general

impression, that missiles, projected from elevated situations, have a more destructive and more irresistible effect than when projected from an equal level. This impression probably arose, and has been handed down from a period anterior to the discovery of gunpowder, when height certainly added force and effect to the catapulta and balista; but, since guns and mortars have been so perfected as to give a momentum to projectiles from all situations as great as can possibly be useful, it must be ranked as a popular error.

No one can doubt that artillery, firing from an elevated situation, is less destructive to bodies of troops than when firing on the same level, in consequence of its great plunge, which scarcely admits of one shot killing more than a file or two; whereas a horizontal discharge frequently sweeps or bounds through a whole column.


With respect, however, to the effect of artillery firing from a height on a besieger's approaches, there is little accordance of opinion even amongst professional men, and probably for this reason, that it is almost entirely dependant on distance. Thus, for instance, a battery of 24-pounders, placed on an elevation of 100 or 120 feet, (about the height of the Castles of Burgos and Badajos,) though firing down on a trench at the distance of 700 or 800 yards, require an elevation of one or $1\frac{1}{2}$ degrees above its crest to reach it; and the same guns firing at a trench on an equal level at the same distance require scarcely more elevation above it, so that the difference of the curve formed by the shot at the instant of striking the trench from either situation is almost imperceptible; and the force of the shot being in both cases the same, no other cause can be assigned why the action of the one should be more destructive than that of the other.

It is, however, very different with the same guns when firing from a similar height, of 100 or 120 feet, at a battery or trench only 3, 4, or 500 yards distant; as the guns being then fired directly down on the work, the shot frequently strikes near the interior edge of the parapet with its greatest force, and, passing through 4 or 5 feet of the interior revetement, renders every part of a battery insecure. From these causes there were more casualties in No. 6 battery at Badajos, third siege, from the fire of the castle, than in all the other enfilading batteries united; and in almost a similar proportion of height and distance, the fire of the batteries at Burgos, having a command of 50 feet over the besieger's batteries, No. 3 and 4, at 150 yards in their front, was nearly irresistible, plunging on the very platforms.

The deduction is, that guns firing from a height on a besieger's approaches, unless the height be within four or five hundred yards, are less destructive than similar guns firing à ricochet on an equal level.

Height of situation invariably gives a most destructive effect to musketry on the approaches, as its use implies close approximation, in which case it is nearly impossible to raise the parapet of a trench or sap sufficiently to cover more than a very small breadth of its surface. Thus, when the head of the sap came within thirty yards of the outer line at Burgos, it required three gabions in height to obtain cover for the troops; and whenever one of the gabions happened to be knocked over, which was not unfrequent from their want of base, the loss was always very considerable in replacing it.

In the attack of a mountain fortress, the effect of direct fire does not seem to be materially diminished by the height



of the defences above the battery as was strongly exemplified in the instance of Willis's batteries at Gibraltar, 400 feet above the isthmus, the parapets of which were frequently destroyed by the enemy's shot as well as shells, and of Marshal Berwick's successful attack of the Castle of Nice before quoted, and the breach effected in the Castle of Badajos in 1811 with ordnance of a very inferior quality. Therefore, a wall standing without any cover on the crest of a height, not exceeding 100 or 150 feet, though a very usual construction, can no more be considered secure from being breached, than if built on a plain. Nor does height of situation screen the interior of a place from the effect of shells, for the highest works at Gibraltar, 1340 feet above the enemy's batteries, were several times, during the siege of 1782, destroyed by shells; and shells, discharged from mortar boats in the bay, frequently passed over the mountain into the Mediterranean.

Height of situation is even likely to offer a facility for reducing small posts by means of the miner; particularly those occupying the summits of lofty rocks from which guns cannot be sufficiently depressed to see their base, and there is not sufficient extent of front to establish flanking points for that purpose, as the destruction of the Castle del Ovo at Naples, and the Citadel of Alicante, sufficiently testify. Even on the extensive northern faces of Gibraltar, previously to the flanking batteries being perforated in St. George's Hall, the enemy's miners found opportunity to make an alarming impression under the defences.

Works on heights, however, when properly constructed, have the excellent defensive property of more effectually

covering their scarps, palisades and defenders, than works on a plain; and, when the rise of the height is very rapid, it utterly precludes the formation and use of batteries à ricochet; besides which, their glacis necessarily terminating in a very sharp angle at its crest, occasions an enormous labour to the besiegers to form a sufficient base on which to place their breaching batteries. Such are the glacis of St. Salvador at Corfu, and of Fort la Lippe at Elvas.

It should however be mentioned, as some counterbalance to these advantages, that a height of one continuous and rapid ascent gives a facility to a besieger for pushing forward his approaches, because, on an inclined plain, less height of parapet gives cover in the sap than when formed on an horizontal base; and the guns of works on steep heights can seldom be sufficiently depressed to fire directly on the trenches, and the progress of the sap can only be opposed by musketry or vertical discharges.

This was also strongly exemplified at Burgos, where, after a lodgment was formed on the top of the outer precipitous line on the 4th October, and there was no further sudden rise, but a continued ascent to the summit of the castle, the workmen and troops found themselves in comparative security from fire.

To carry approaches from a height against a work situated on a parallel height, having a valley between them, is attended with considerable difficulties; for, if the side of the hill to be descended be very steep, no practicable depth of trench or height of parapet will give cover to the troops, unless each return of the approaches be directed very much clear of the salients of the work

under attack, which increases considerably the length of each return, and consequently the labour of forming it; and, even after this additional labour, the ordnance next the salients of the besieged place which take the approach *en echarpe*, have a murderous effect.

The depth required to obtain cover will, of course, be greater or less in descending equal slopes, according to the relative height of the ground to be opened for the approach, and of the enemy's work; but, to give a practical instance of the extent of the evil, it is mentioned that an approach, six feet in width, required to be made of a similar depth, not to be seen into from the upper batteries of the castle, when descending the steep height on the south of the hornwork of St. Michael at Burgos.

Another inconvenience, incident to carrying approaches down very steep declivities, is, that the rear of the trench is higher than the parapet in front, and many howitzer shells, fired *à ricochet*, which miss the former, are stopped by the latter, and fall into the trench; and frequently, shells from mortars, pitched beyond the trench, roll back into it, in consequence of the steepness of the face of the hill.*

It is apparent that as the approaches nearly reach the bottom of the valley these evils increase, and that all the advantages of defence to be drawn from height of situa-

* The workmen, from dread of this reaction, which can never occur without being observed by them, usually endeavour to throw up a bank of earth along the rear of the trench to stop the rolling shells, which practice, however, should be forbidden, as the bank catches more of the shells fired at low angles than it stops from rolling back; besides, a great depth of trench is at all times an inconvenience, from the difficulty of getting out of it in cases of necessity, and therefore anything which serves to increase its depth should be guarded against. From a neglect of keeping the rear of the trenches practicable at Badajos, fifteen men were killed or wounded by one shell, which fell into the parallel at the time of the relief of the parties.

tion, operate against the besieger's trenches in a ratio according to the steepness of the descent and the relative height of the sides of the valley; therefore any plan of operations, which necessitates carrying the approaches across a valley for the attack of a work on the opposite side, should, if possible, be avoided.

From these various counterbalancing properties, resulting from height of situation, it may be concluded, that a fortress is not to be pronounced of great strength from the circumstance of elevated situation alone; for, even to form a moderately just opinion of its strength, it must be ascertained that its walls are all covered from distant batteries, that its interior be casemated, that the face of the height be under fire of the ramparts, or, if precipitous, that it be flanked on every point. If such, however, be found the case, height of situation must be considered to add greatly to the defensive powers of a place, and demands our respect.

*Considerations on the Disadvantages accruing to a place
from being commanded.*

Having endeavoured in the preceding Note to discuss the real value of height of situation as a defensive quality, it may not be amiss to endeavour to ascertain the amount of the ill arising from its reverse, or a place being situated lower than the hills without it; and to inquire if it really be an evil of such magnitude as is generally supposed:—the term “commanded” being usually accepted as denoting every thing bad; and many officers even carrying their feeling on this point so far as

to believe that a very commanding height deprives a fortress of all powers of resistance.*

The most prominent disadvantages under which a fortress labours from being commanded are, that the defenders of the work, and the interior of the place, are seen and exposed to the direct fire of a besieger's artillery, that its escarpes are also exposed to be battered in a certain degree lower down, according to the greater or less height of the hill which commands them, and that in the same degree the range of the enemy's projectiles is increased.

Considered abstractedly, to be seen is rather an inconvenience than a positive ill, and as projectiles are never used at sieges from situations requiring their utmost range, the prominent evils from being commanded reduce

* In 1806, when the British force in Sicily occupied Messina only, the Author was employed by Sir John Stuart, with consent of the Sicilian government, to make a confidential report on the fortresses of Augusta and Syracuse, to ascertain what might be expected from them and their governors, in case of invasion.

He was made minutely acquainted with every particular, connected with the defence of those places, by the commandants of artillery and engineers, and at Augusta those officers accompanied him when he waited on the governor to take leave. The governor, after asking them if they had pointed out every thing, and being answered in the affirmative, beckoned Captain J—— to follow him into a private and very retired apartment: then, carefully shutting the door, and looking round with much anxiety lest the walls might hear, he began—"Have you discovered the defect of my place?" "I have observed some of the scarps to be imperfectly covered." "No; not that." "A great facility for carrying the town by a coup-de-main from the harbour?" "No." "The parapets and platforms faulty?" "No." "A want of casemated cover?" "No—no—no, an infinitely more important defect—a fatal defect—it is unknown to the engineers and to all my officers, and, I hope, to all the world; but as you have letters from the minister to be made confidentially acquainted with every thing relating to Augusta, it becomes my duty to communicate it to you;" and then, closely approaching with a look of importance and self-approbation, he whispered—"I have ascertained that the land front is commanded eight feet by a hill in its front, and of course, a besieger once established on that point, further resistance becomes hopeless, and I must instantly capitulate on the best terms he will grant;" adding, with a squeeze of the hand and a look of horror, "secrecy, secrecy, mio Caro!"

themselves to two, the greater exposure of the escarpes, and the direct fire of a besieger's artillery on the garrison whilst defending the works, and on the works themselves and their armament. Now the point-blank range of a 24-pounder being under 600 yards, and as it will not batter with good effect at a greater distance than 800 or 1,000 yards, it would seem that all command in front beyond the latter distance is nearly harmless, except from the inconvenience it occasions to the garrison of being seen.*

Within the distance of 800 yards, being commanded is, indisputably, a most serious detriment to a place, as its artillery may be dismounted, its defenders killed, its escarpes laid open, and its buildings destroyed by a direct and accurate fire from the height; but the effects of such command may be greatly reduced, or even rendered null, by a just disposition of the works, and their relief. If a place be only commanded by one hill, and that of a moderate height, it requires no stretch of the imagination to comprehend, that if, instead of being built on an horizontal plane, as is customary, the works were constructed on a plane passing from some point in the interior, a few feet over the top of the hill commanding them, they would equally cover each other, and their parapets equally cover the defenders, as if the hill did not exist, and they had been built on an horizontal plane. Upon a similar principle, but by a process too difficult to explain in a note, the exposure arising from the direct

* It should be mentioned that the fire of the iron 24-pounders has attained so much force and precision, that battery No. 11, placed on a commanding height against the Castle of St. Sebastian, and which took the high curtain of the land front en echarpe at the distance of 1500 yards, repeatedly struck the terreplein with effect.

command of several moderate hills on the same front may be avoided; and even the works may be screened by the above method, and by the addition of traverses, parados, &c. from the command of such hills all around the place.

But if the hills are of a great height, and near the place, the mischief arising from their command cannot be obviated by defilement, and even in many cases where it is possible to effect the defilement, the great labour and expense of so doing put it out of the question. Under such circumstances, the best resources are casemates and countermines, or to occupy the summits of the commanding hills by works of sufficient strength to restore the equilibrium of defence, such, for instance, as Fort Montjuic at Barcelona, Gonzaga and Castelfacio at Messina, and La Lippe at Elvas, which even render the side commanded the strongest of the place; and such will be the work constructing at this moment on Mont

Feron at Ath.*

* This latter remedy for command costs the engineer so little trouble to plan, and is so generally approved, that a redoubt placed on the summit of any commanding height is becoming a sort of panacea to neutralize the effects of command. It should, however, never be resorted to except where the heights are close to the fortress, say within 600 yards, or that the resources of the engineer's art prove unequal to obtain an equilibrium of defence, by a superiority of construction of the fronts of the enceinte commanded by the height; for advanced works cost more in their construction, and add more to the ordnance, stores, and men required for the defence of a fortress in proportion, than a similar degree of strength gained for a place by additions to the enceinte, for they must be most complete in every defensive detail; and, unless their communications be extremely well secured, they must, when near the theatre of operations, be kept fully manned, to secure them from being surprised, and be furnished with a full proportion of every thing necessary for their own defence, and when vigorously attacked they are seldom capable, from want of space, of making a protracted resistance.

Who has not observed, whilst examining fortresses in hilly countries, (Genoa, for instance,) that advanced fort after advanced fort, thrown up to occupy hill after hill, and requiring an army for their occupation, might have been dispensed with, and the place increased in strength, if one half the labour, thus scattered over miles of country, had been judiciously confined to strengthening and securing the commanded fronts?

There remains a disadvantage still to be mentioned accruing to a place from being commanded, which is, that a besieger's first batteries, placed on the height which commands it, may remain open till the last moment of the attack without incommoding his near approaches; but when the height falls rapidly in one continued plane to the glacis of the place, this advantage is much counterbalanced by the difficulty mentioned in the former note, of carrying the approaches down hill; and should the fall of the ground be gradual, it will frequently happen that the fire of the batteries on the height will prove almost as annoying to those in the advanced part of the trenches, as to the defenders of the place.

From these causes command is far more prejudicial to the defence of those works of a place, the general prolongation of which it intersects, than to the defence of those works to which it is parallel; even if the distance of the lateral command of such height be greater than that of its direct command. This may be exemplified by reference to the attacks of Ath, in 1697 and 1700, by those great masters of the art, Vauban and Marlborough, and subsequently by the Count de Clermont in 1745.

Plate 10, Fig. 7.—Two fronts of the enceinte of that fortress *a b*, *b c* are traced parallel to Mont Feron, which, at 600 yards distance, overtops their ramparts 75 feet, the interval being a regular slope to the foot of their scarps, and which no exertion of art has been able to screen from the direct fire of artillery from so domineering a point in their immediate front. Still in neither attack did those officers avail themselves of batteries on this commanding height to breach the scarp-walls of the fronts

opposed to it, or to establishing a commanding fire to ruin their parapets, and then carry their approaches almost unopposed down the face of the hill to the counterscarp; but, on the contrary, establishing on the height powerful enfilading batteries to ricochet the collateral fronts, the prolongation of which the command of Mont Feron intersects, Vauban carried his approaches towards the front *a e* to the right, and Marlborough his towards the front *e d* to the left, and to each Ath fell an easy conquest.

The Count de Clermont, in 1745, followed with equal success the path traced by the British general; so that it may safely be inferred from these examples, that the side of a place most closely commanded, when that command is direct, is not consequently the weakest.

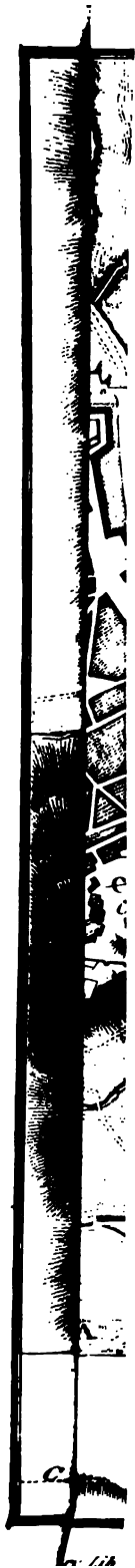
From the above statement it is apparent, that a fortress is not to be lightly and utterly condemned, because it may happen to be commanded; for if the heights commanding it be at a greater distance than 800 or 1,000 yards, and do not enfilade any general line, they can have very little influence on the attack or defence. If the heights are not more distant than 600 yards, and on one side only, the effects of their command may have been parried by defilement, and by the same art a certain degree of strength may have been given to a fortification when closely surrounded by moderate heights; and even where defilement has been impracticable, casemates, countermines, reverse batteries and retrenchments on the weakest fronts, may have more than compensated the general exposure. But if on examination these precautions are found to have been neglected, a fortress which

is closely commanded by heights may safely be pronounced of little strength,—though there are innumerable instances in former, and some few in late wars, of such places having made good defences, from the intelligence of the governor reserving the troops for the last stages of the defence, when the combatants become too closely in contact to admit of the interference of fire from distant batteries.

END OF VOL. I.

L O N D O N :
PRINTED BY C. ROWORTH, BELL YARD,
TEMPLE BAR.

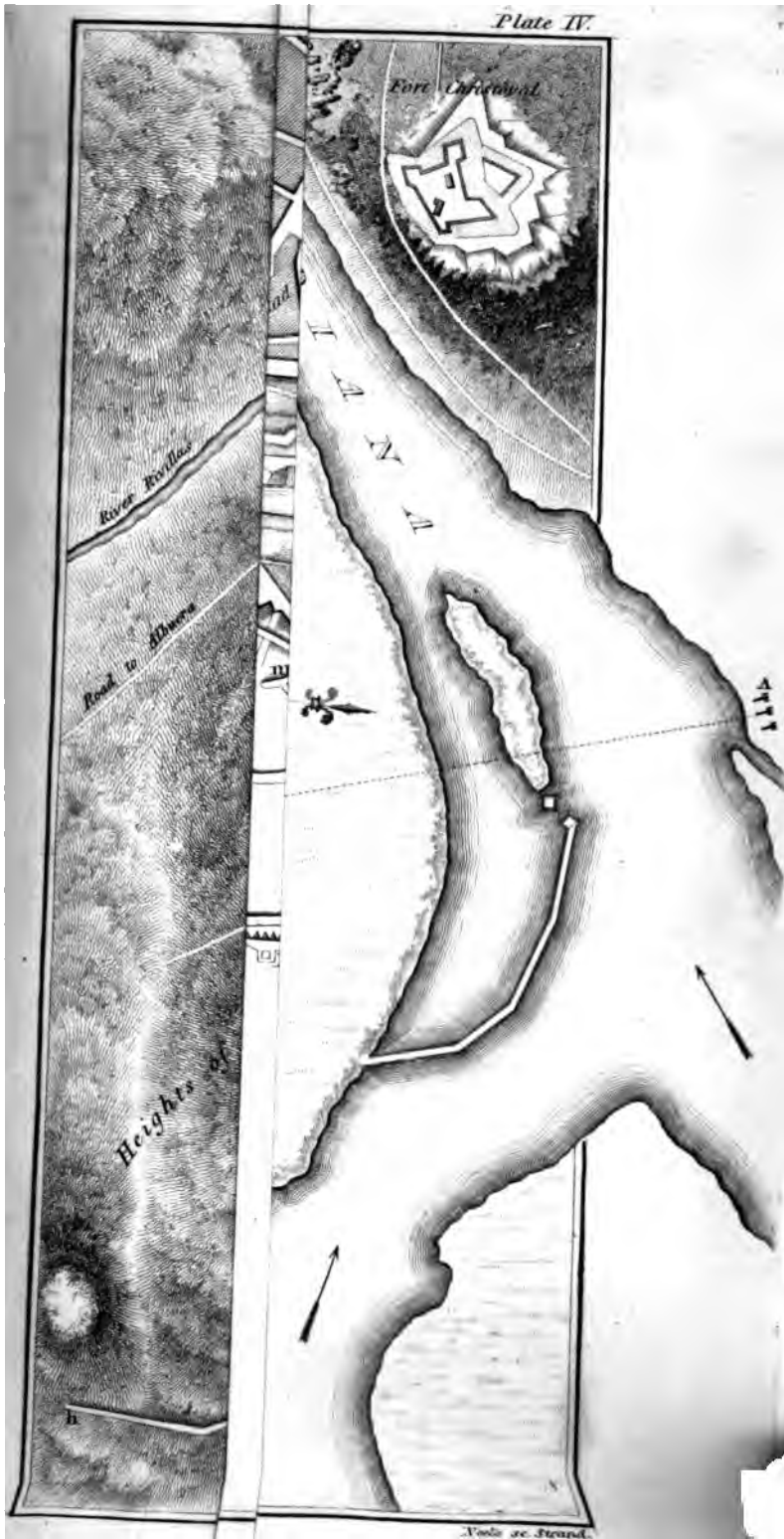






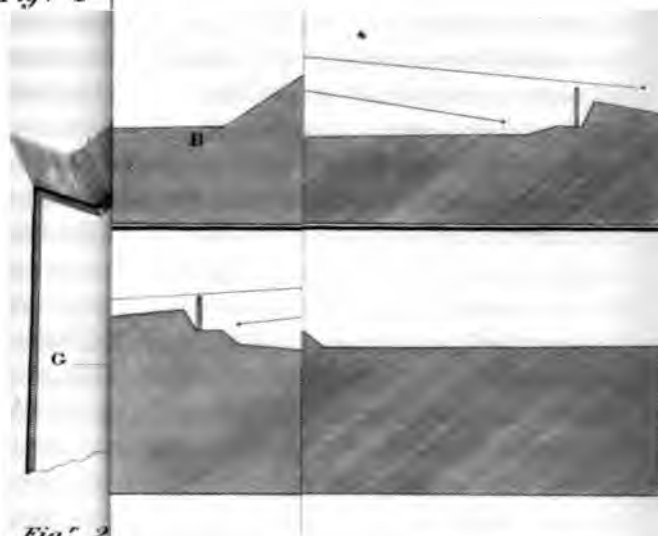




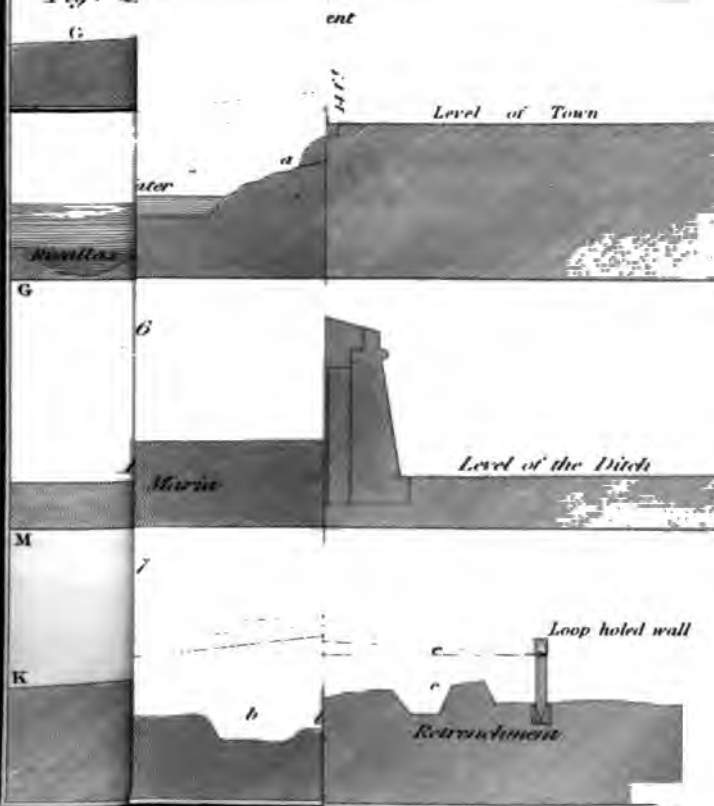


Fig^r 3

Fig^r 1



Fig^r 2







Hall



Fig. 4.

RETIRO ENTRENCHMENT



Plan of the Retiro Entrenchment.

Fig. 5.



Fig. 7.



Crest of

Crest of Parapet L.

Rampart

M Level

7

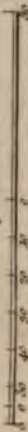
CITY OF BURGOS.



Dessiné par St. Michael

Attack of the
CASTLE OF BURGOS,
between the 19. Sept. & 24. October
1812.

Scale of Yards



Scale each 354 French.

London Published August 2. 1817 by T. Egerton. Military Library, White Hall.

1. 1

2. 2

3. 3

4. 4



